DOCUMENT RESUME

ED 324 177 RC 017 777

TITLE	Indian Adolescent Mental Health. OTA Special Report.
INSTITUTION	Congress of the U.S., Washington, D.C. Office of Technology Assessment.
REPORT NO	OTA-H-446
PUB DATE	Jan 90
NOTE	98p.
AVAILABLE FROM	Superintendent of Documents, Government Printing Office, Washington, DC 20402-9325 (Stock No. 052-003-01175-1, $3.50).
PUB TYPE	Information Analyses (070)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	*Adolescents; Alaska Natives; *American Indians; Children; *Delivery Systems; Federal Programs; Health Needs; *Health Services; Mental Disorders; *Mental Health; Mental Health Programs; Public Policy; Stress Variables; Youth Problems
IDENTIFIERS	*Indian Health Service

ABSTRACT

The Senate Select Committee on Indian Affairs is considering legislation to improve mental health services to American Indians and Alaska Natives. This report is in response to the Committee's request for information on the mental health needs of Indian adolescents and the services available to them. The section on mental health problems among American Indian and Alaska Native youth examines: (1) diagnosable mental disorders, particularly developmental disorders, depression, suicide, anxiety, and substance abuse and dependence; (2) serious, but less diagnostically specifiable, problems of adolescence, such as low self-esteem, conduct disorder, school dropout, delinquency, and running away; and (3) environmental risk factors, including otitis media, fetal alcohol syndrome, child abuse and neglect, parent alcoholism, family disruption, and stressful school environment. The section on delivery of mental health services discusses: (1) agencies and programs involved in service delivery, including the Indian Health Service (IHS), Bureau of Indian Affairs, tribal health programs, urban Indian health programs, and state and local service agencies; (2) treatment settings and therapeutic interventions adapted to and by American Indians; (3) cultural insensitivity in Indian mental health programs; (4) community involvement; and (5) agency coordination efforts. The report concludes that 160-200 child and adolescent mental health providers are needed in IHS service areas, and presents Congressional policy options. This report contains 390 references and 37 data tables. The appendixes include a review of earlier evaluations of Indian adolescents' mental health needs. (SV)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED324177

SCOPE OF INTEREST NOTICE

The ERIC Facility has assigned this document for processing to:

In our judgment, this document is also of interest to the Clearinghouses noted to the right. Indexing should reflect their special points of view.

indian adolescent mental health

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

RC 017777

CONGRESS OF THE UNITED STATES
OFFICE OF TECHNOLOGY ASSESSMENT

Office of Technology Assessment

Congressional Board of the 101st Congress

EDWARD M. KENNEDY, *Massachusetts, Chairman*

CLARENCE E. MILLER, *Ohio, Vice Chairman*

Senate

ERNEST F. HOLLINGS
South Carolina

CLAIBORNE PELL
Rhode Island

TED STEVENS
Alaska

ORRIN G. HATCH
Utah

CHARLES E. GRASSLEY
Iowa

House

MORRIS K. UDALL
Arizona

GEORGE E. BROWN, JR.
California

JOHN D. DINGELL
Michigan

DON SUNDQUIST
Tennessee

AMO HOUGHTON
New York

JOHN H. GIBBONS
(Nonvoting)

Advisory Council

DAVID S. POTTER, *Chairman*
General Motors Corp. (Ret.)

CHASE N. PETERSON, *Vice Chairman*
University of Utah

CHARLES A. BOWSHER
General Accounting Office

MICHEL T. HALBOUTY
Michel T. Halbouty Energy Co.

NEIL E. HARL
Iowa State University

JAMES C. HUNT
University of Tennessee

HENRY KOFFLER
University of Arizona

JOSHUA LEDERBERG
Rockefeller University

WILLIAM J. PERRY
H&Q Technology Partners

SALLY RIDE
California Space Institute

JOSEPH E. ROSS
Congressional Research Service

JOHN F.M. SIMS
Usibelli Coal Mine, Inc.

Director

JOHN H. GIBBONS

The Technology Assessment Board approves the release of this report. The views expressed in this report are not necessarily those of the Board, OTA Advisory Council, or individual members thereof.

indian adolescent mental health

CONGRESS OF THE UNITED STATES
OFFICE OF TECHNOLOGY ASSESSMENT

19-756 0 - 90 - 1 : QL 3

Recommended Citation:

U.S. Congress, Office of Technology Assessment, *Indian Adolescent Mental Health* OTA-H-446 (Washington, DC: U.S. Government Printing Office, January 1990).

Library of Congress Catalog Card Number 89-600775

For sale by the Superintendent of Documents
U.S. Government Printing Office, Washington, DC 20402-9325
(order form can be found in the back of this special report)

Foreword

American Indians and Alaska Natives have a unique historical and legal relationship with the Federal Government. In this "government-to-government" relationship, Federal programs for Indians are administered principally by the Department of the Interior's Bureau of Indian Affairs. Federal health programs are administered chiefly by the Indian Health Service, a component of the Public Health Service in the Department of Health and Human Services. In addressing the health needs of American Indians and Alaska Natives, mental health has lagged behind.

The U.S. Senate Select Committee on Indian Affairs is considering the introduction of legislation to address the mental health needs of American Indians and Alaska Natives. In connection with a full OTA assessment of adolescent health issues, the Senate Select Committee on Indian Affairs asked OTA to evaluate the mental health needs of American Indian and Alaska Native adolescents.

Adolescents are among the most vulnerable of American Indians and Alaska Natives. To the extent they were born with fetal alcohol syndrome, are abused or neglected, live in distressed families and communities, or exhibit mental health problems such as depression, anxiety, developmental disorders, learning disabilities, substance abuse, conduct disorders, and suicidal behavior, Indian adolescents are both distressed themselves and affect the collective future of Indians. This Special Report responds to the Committee's request for information on these problems and on the services available to respond to Indian adolescents' mental health needs.

The Special Report is the second publication of OTA's adolescent health assessment. The first publication was *Adolescent Health Insurance Status: Analyses of Trends in Coverage and Preliminary Estimates of the Effects of An Employer Mandate and Medicaid Expansion on the Uninsured*, a Background Paper published in July 1989, and scheduled to be updated in spring 1990. The full report on adolescent health will be published in 1990.[1]

John H Gibbons

JOHN H. GIBBONS
Director

---

[1] With respect to the overall health of American Indians and Alaska Natives, OTA also published *Indian Health Care*, a report addressing the health status of Indians of all ages and the Indian Health Service delivery system, in 1986.

OTA Adolescent Health Advisory Panel

Felton Earls, *Chair*
Department of Behavioral Sciences,
Harvard School of Public Health
Boston, MA

Michael I. Cohen, *Vice Chair*
Chairman, Department of Pediatrics
Montefiore Hospital
New York, NY

Claire Brindis
Co-Director
Center for Population and Reproductive Health Policy
Institute for Health Policy Studies
San Francisco, CA

Ann W. Burgess
van Amerignen Professor of Psychiatric Mental Health Nursing
University of Pennsylvania School of Nursing
Philadelphia, PA

Delores L. Delaney
President
Virginia PTA
Virginia Beach, VA

Abigail English
Director, Adolescent Health Care Project
National Center for Youth Law
San Francisco, CA

Jewelle Taylor Gibbs
School of Social Welfare
University of California
Berkeley, CA

Michael Graf
Director, Mental Health
Tanana Chiefs Conference, Inc.
Fairbanks, AK

David E. Hayes-Bautista
Professor, School of Medicine
Director, Chicano Studies Research Center
University of California, Los Angeles
Los Angeles, CA

Karen Hein
Division of Adolescent Medicine
Department of Pediatrics
Albert Einstein College of Medicine
Montefiore Medical Center
Bronx, NY

Charles E. Irwin, Jr.
Division of Adolescent Medicine
Department of Pediatrics
School of Medicine
University of California
San Francisco, CA

Robert Johnson
Division of Adolescent Medicine
Department of Pediatrics
New Jersey Medical School
Newark, NJ

Alan Kazdin
Professor of Psychology
Department of Psychology
Yale University
New Haven, CT

Teresa LaFromboise
School of Education
Stanford University
Stanford, CA

Mary Nell Lehnhard
Vice President
Office of Government Relations
Blue Cross and Blue Shield Association
Washington, DC

Barbara D. Matula
Director
State of North Carolina
Department of Human Resources
Division of Medical Assistance
Raleigh, NC

Robert B. Millman
Saul P. Steinberg Distinguished Professor of Psychiatry and Public Health
Director, Adolescent Development Program
Director, Alcohol & Substance Abuse Service
Cornell University Medical College—New York Hospital
New York, NY

Daniel Offer
Director, Center for the Study of Adolescence
Michael Reese Hospital Medical Center
Chicago, IL

Leticia Paez
Associate Director
Area Health Education Center
Texas Technical University
School of Medicine
El Paso, TX

Cheryl Perry
Associate Professor
Division of Epidemiology
School of Public Health
University of Minnesota
Minneapolis, MN

Anne C. Petersen
Dean
College of Health and Human Development
Pennsylvania State University
University Park, PA

Lee Etta Powell
Superintendent of Schools
Cincinnati, OH

Roxanne Spillett
Director, Program Services
Boys Clubs of America
New York, NY

Edward Tetelman
Assistant Commissioner
Intergovernmental Affairs
New Jersey Department of Human Services
Trenton, NJ

Myron Thompson
Trustee
Bernice Pauahi Bishop Estate
Honolulu, HI

NOTE: OTA appreciates and is grateful for the valuable assistance and thoughtful critiques provided by the advisory panel members. The panel does not, however, necessarily approve, disapprove, or endorse this special report. OTA assumes full responsibility for the special report and the accuracy of its contents.

OTA Special Report—
Indian Adolescent Mental Health

Roger C. Herdman, *Assistant Director, OTA*
Health and Life Sciences Division

Clyde J. Behney, *Health Program Manager*

Project Staff

Denise Dougherty, *Project Director*

Kelly Metcalf, *Research Analyst*
Kirsten Rowe, *Analyst*

Administrative Staff

Virginia Cwalina, *Administrative Assistant*
Carol Ann Guntow, *P.C. Specialist*
Karen T. Davis, *Word Processor Specialist*
Carolyn Martin, *Secretary*

Contractors

Spero Manson
National Center for American Indian
and Alaska Native Mental Health Research
University of Colorado Health Sciences Center
Denver, CO

Lois Bergeisen
Gaithersburg, MD

OTA Indian Adolescent Mental Health Workshop Participants

Teresa LaFromboise, *Chair*
School of Education, Stanford University
Stanford, CA

Marva Benjamin
Minority Initiative Director
CASSP Technical Assistance Center
Georgetown University Child Development Center
Washington, DC

Irving Berlin
Professor
Division of Child & Adolescent Psychiatry
Department of Psychiatry
School of Medicine
University of Mexico
Albuquerque, NM

J.R. Cook
Executive Director
United National Indian Tribal Youth Inc.
Oklahoma City, OK

Paul Dauphinais
School Psychologist
Turtle Mountain Community School
Bellcourt, ND

Kathryn Manness
Coordinator
American Indian Program Development
Los Angeles, CA

Philip May
Department of Sociology
University of New Mexico
Albuquerque, NM

Henry Montes
Health Promotion Program
Henry J. Kaiser Family Foundation
Menlo Park, CA

Leonard Saxe
Visiting Professor
Bigel Institute
Florence Heller School
Brandeis University
Waltham, MA

Judi Siegfried
Director, Service Center
Pueblo of Laguna
Old Laguna, NM

Norine Smith
Director
Indian Health Board
Minneapolis, MN

Evelyn Tucker
Anchorage, AK

Indian Health Service:

Albert Hiat
Chief, Children's Program
Indian Mental Health Branch
Indian Health Service
Albuquerque, NM

Scott Nelson
Chief
Indian Mental Health Branch
Indian Health Service
Rockville, MD

Bureau of Indian Affairs:

Joe Little
Chief, Judicial Services

Bill Mehojah
Office of Indian Education

Gene Powers
Acting Director
Alcohol and Substance Abuse Office

Congressional Staff:

Yvette Joseph
Professional Staff Member
Select Committee on Indian Affairs

OTA Contractors:

Spero Manson
Director
National Center for American Indian & Alaska Native Mental Health Research
University of Colorado
Health Sciences Center
Denver, CO

Lois Bergeisen
Gaithersburg, MD

NOTE: OTA appreciates and is grateful for the valuable assistance and thoughtful critiques provided by the workshop participants. The workshop participants do not, however, necessarily approve, disapprove, or endorse this special report. OTA assumes full responsibility for the special report and the accuracy of its contents.

CONTENTS

Page

CHAPTER 1: EXECUTIVE SUMMARY AND POLICY OPTIONS 1
Findings 1
Guiding Principles and Options for a Community-based, Comprehensive, Mental Health Services System for Indian Adolescents 4
  Guiding Principles 4
  Obstacles to Implementing Guiding Principles 4
  Congressional Options 6
Organization of the Special Report 10
CHAPTER 2: MENTAL HEALTH PROBLEMS OF AMERICAN INDIAN AND ALASKA NATIVE ADOLESCENTS 13
Diagnosable Mental Disorders 13
  Developmental Disorders 13
  Depression 14
  Suicide 16
  Anxiety 20
  Substance Abuse and Dependence 21
  Identity Disorder, Alienation, and Self-Esteem 22
  Conduct Disorder, School Dropout, Delinquency, and Running Away 23
Environmental Risk Factors for Mental Health Problems 26
  Physical Disorders 26
  Child and Adolescent Abuse and Neglect 27
  Parental Alcoholism 30
  Family Disruption 30
  School Environment 31
  Other Life Stressors 31
Conclusions and Policy Implications 31
  Patient-Centered Data Systems 33
  Surveillance Units 34
  Epidemiologic Data 34
CHAPTER 3: DELIVERY OF MENTAL HEALTH SERVICES TO AMERICAN INDIAN AND ALASKA NATIVE ADOLESCENTS 35
Agencies Involved in the Delivery of Mental Health and Related Services to Indian Adolescents 35
  Indian Health Service 43
  Bureau of Indian Affairs 39
  Tribal Health Programs 40
  Urban Indian Health Programs 42
  State and Local Service Agencies 43
Mental Health Treatment Settings and Services as Adapted To and By American Indians 44
  Treatment Settings 44
  Therapeutic Interventions 45
Preventive and Promotive Interventions 52
  Overview 52
  Preventive and Promotive Efforts Specific to Indian Adolescents 53
Cultural Sensitivity in Indian Mental Health Programs 53
Community Involvement 54
Holding the System Together 55
  Overview 55
  Coordination Efforts Among Indian-Serving Agencies 55
Conclusions and Policy Implications 56
APPENDIX A: EARLIER EVALUATIONS OF AMERICAN INDIAN AND ALASKA NATIVE ADOLESCENTS' MENTAL HEALTH NEEDS AND SERVICES 57
APPENDIX B: POPULATION ESTIMATES FOR ESTIMATING SUICIDE DEATH RATES 59
APPENDIX C: OVERVIEW OF INDIAN HEALTH SERVICE 60
APPENDIX D: ACKNOWLEDGMENTS 64

Figures

Figure *Page*

1. Distribution of Indian Health Facilities Throughout the Continental United States and Alaska, 1985 3
C-1. Organization of the Indian Health Service 62
C-2. Health Services Managed by Indian and Alaskan Tribal Governments 63
C-3. Service Units, Hospitals, Health Centers and Stations, and Other Treatment Services OOperated by Indian Health Service Area Offices 63
C-4. Indian-Operated Urban Projects Partially Supported by Indian Health Service 63

Tables

Table *Page*

1. Child and Adolescent-Trained Mental Health Care Providers for Indian 2
2. Studies Generating Estimates of Developmental Disabilities Among Indian Children and Adolescents 14
3. School-Related Handicapping Conditions of Ethnic Minorities, 1984 14
4. Studies Generating Estimates of Depression AMong Indian Adolescents 15
5. Indian and U.S. All Races Age-Specific Suidice Death Rates per 100,000 Population 1980-86 17
6. Percentage of IHS and Contract Care Hospital Discharges for 10- to 19-Year-Olds Involving a Suicide "E-Code," 1980-86 17
7. Percentage of Indian and Minnesota Adolescents in Grades 6 Through 12 Ever Attempting Suicide .. 18
8. Percentage of Indian Adolescent Suidice Attempters and Non-Attempters Having Suicidal Thoughts and Receiving Mental Health Treatment 19
9. Percentage of Indian Adolescent Males and Females Who Reporting Knowing of Others' Suicide Attempts and Suicide Deaths 19
10. Covariation of Suicide Attempts With Behavioral and Environmental Risk Factors 20
11. Studies Generating Estimates of Anxiety Among Indian Adolescents 21
12. Estimates of Percentage Indian and Non-Indian Adolescents Ever Using Alcohol and Illegal Drugs .. 22
13. Studies Generating Estimates of Self-Esteem and Alienation Among Indian Children and Adolescents 24
14. Reasons Given By Indian Adolescents for Running Away 26
15. Studies Generating Estimates of Abuse and Neglect Among Indian Children and Adolescents 28
16. Percentage of Indian Adolescents Who Indicated Ever Being Abused by Family Members or Others 29
17. Percentage of Indian and Minnesota Adolescents Who Indicated Ever Being Physically or Sexually Abused 29
18. Covariation of Abuse With Behavioral Risk Factors and Stress 30
19. Status of Biological Parents and Living Arrangements of Indian and Minnesota Adolescents 30
20. Perceptions of School Environmets by Indian and Minnesota Students 32
21. Perceptions of School Environments by Southwest, Plains, and Southeast Indian Students 32
22. School Pressures Experienced as Stressful by Indian Students 32
23. General Well-Being and Stress Among Indian and Minnesota Adolescents 33
24. Indian Health Service Mental Health Programs Branch Staff, April 1989 36
24b. Child- and Adolescent-Trained Meantal Health Professionals 36
25. IHS Mental Health Programs Branch User Population, Budget Per Capita, and Mental Health Providers Per 10,000 Population by IHS Service Area, FY 1988 37
26. Overview of IHS Alcoholism/Substance Abuse Program Branch 39
27. Overview of U.S. Department of the Interior, Burau of Indian Affairs (BIA) Educational Programs 40
28. Responsibilities of Local Child Protection Teams 41
29. Barriers to Effective Child Protection Services 41
30. Overview of Tribal Health Programs 42
31. Overview of Urban Indian Mental Health Programs 43
32. Single Issue Groups for Parent-Child Relationships 49
33. Single Issue Groups for Indian Youth at Risk 51
34. Family Involvement in Therapy 59
B-1. IHS Service Area Population Estimates Using Method #1 59
B-2. IHS Service Area Estimates Using Method #2 59
C-1. IHS Allocations by Budget Category, Fiscal Year 1988 61

Chapter 1

Executive Summary and Policy Options

The Senate Select Committee on Indian Affairs is considering legislation to enhance and improve mental health services to Indians.[1] The Committee asked the Office of Technology Assessment to assist them in this effort by reviewing the mental health needs of Indian adolescents[2] and the services available to them, and to provide options that Congress might consider when designing its legislation. This chapter summarizes the findings of OTA's review, suggests options that Congress might consider, and provides an overview of the remainder of the Special Report.

FINDINGS

Scientifically acceptable information on the extent of mental health problems among Indian adolescents and on the availability, accessibility, and effectiveness of mental health services specifically for Indian adolescents is scarce. The information that does exist makes clear, however, that mental health services for Indian adolescents are inadequate. The data that do exist on mental health problems suggest that Indian adolescents have more serious mental health problems than the U.S. all races population with respect to:

- developmental disabilities, such as mental retardation and learning disabilities;
- depression;
- suicide;
- anxiety;
- alcohol and substance abuse;
- self-esteem and alienation;
- running away; and
- school dropout.

While the causes of mental health problems are not known with certainty, the life situations of many Indian adolescents are filled with stressors that can lead to emotional distress and serious mental and behavioral problems. These stressors include (in addition to those listed above):

- recurrent otitis media and its consequences for learning disabilities and psychosocial deficits;
- fetal alcohol syndrome and its consequences for mental retardation and less severe forms of developmental disabilities, as well as psychosocial deficits;
- physical and sexual abuse and neglect;
- parental alcoholism;
- family disruption; and
- poor school environments.

In addition, because of their developmental need to establish their own identities, Indian adolescents often feel particularly caught between two cultures.

The resources to cope with these serious problems are clearly inadequate. While there are at least 397,000 children and adolescents in Indian Health Service (IHS) service areas, IHS funds only 17 mental health providers trained to treat children and adolescents, a ratio of less than one-half a mental health provider to every 10,000 children and adolescents. In total, approximately 1 to 2 percent of IHS's budget is allocated to mental health services for Indians of all ages. Only 3 percent of tribal and urban staffs are mental health providers. Publicly funded State and local services are either unavailable or unacceptable to Indian people.[3]

Further, the distribution of the 17 mental health providers trained to work with children or adolescents varies considerably by IHS service area (see table 1). The Bemidji area; California

---

[1] In this Special Report, the term Indians is used to refer to American Indians and Alaska Natives.

[2] This Special Report is the second publication from OTA's full assessment of adolescent health. The full assessment will be published in late 1990.

[3] Services may be unacceptable for a number of reasons. One of the longstanding concerns in providing mental health treatment and prevention services to Indians is the need for cultural sensitivity. Currently, there is a shortage of trained minority mental health providers, and sometimes those who have completed training find that the education offered by nonminority institutions serves to alienate them from their community rather than make them a resource.

Table 1—Child- and Adolescent-Trained Mental Health Care Providers for Indian Adolescents by IHS Service Area

IHS service area	Reservation States included in service area	Estimated adolescent user population[a]	Number of child- and adolescent-trained mental health care providers	Child- and adolescent-trained mental health care providers per 10,000 adolescent population[b]
Aberdeen	ND, SD; NE, IA	9,969	2	2.0
Alaska	AK	10,922	1	0.9
Albuquerque	NM, CO	15,434	1	0.6
Bemidji	MN, WI, MI	11,272	—	0.0
Billings	MT, WY	12,012	9	7.5
California	CA	8,388	—	0.0
Nashville	AL, MS, LA, FL, NC, PA, NY, CT, ME	5,342	—	0.0
Navajo	AZ, NM, UT	42,657	2	0.5
Oklahoma	OK, KS	48,090	1	0.2
Phoenix	AZ	17,642	—	0.0
Portland	OR, WA, ID	12,617	1	0.8
Tucson	AZ[c]	5,077	—	0.0
Total adolescents aged 10-19 in IHS service areas		199,422	17	0.8
Urban areas	States with urban programs			
Various	AZ, CA, CO, IL, KS, MA, MI, MN, MT, NM, NV, NY, OK, OR, SD, TX, UT, WA, WI	160,000[d]	N/A[e]	N/A

[a] Calculated from percent distribution of adolescent population for IHS service areas by age based on 1980 U.S. Census Data (347). May not be current.

[b] In some ways, these data overestimate the number of mental health providers for adolescents. For example, the 17 IHS-funded providers are to serve both adolescents aged 10 to 19 and children younger than 10. Older children are more likely to require and seek therapy, however.

[c] South-central Arizona only.

[d] The number of Indian adolescents living in urban areas served by Urban Indian Health Programs is not known. OTA's estimate is based on an estimated total Indian population of approximately 1.5 million (estimate for 1985; 322), approximately 24 percent (360,000) of whom are estimated to be between 10 and 19 years old (see footnote b). If approximately 200,000 of these adolescents live in IHS service areas (see above), 160,000 would live in areas not served by IHS. This estimate is consistent with 1980 census figures showing that 50 percent of Indians live in metropolitan areas. However, not all of these Indian adolescents live in urban areas with Urban Indian Health Programs, so this is probably an overestimate of the adolescent population served by Urban Indian Health Programs. In addition, some Indians living in metropolitan areas are served by IHS (322).

[e] The number of child- and adolescent-trained mental health providers in urban areas is unknown. In any event, the number would be small because fewer than 3 percent (15 to 20 providers total) of urban program staffs are mental health providers.

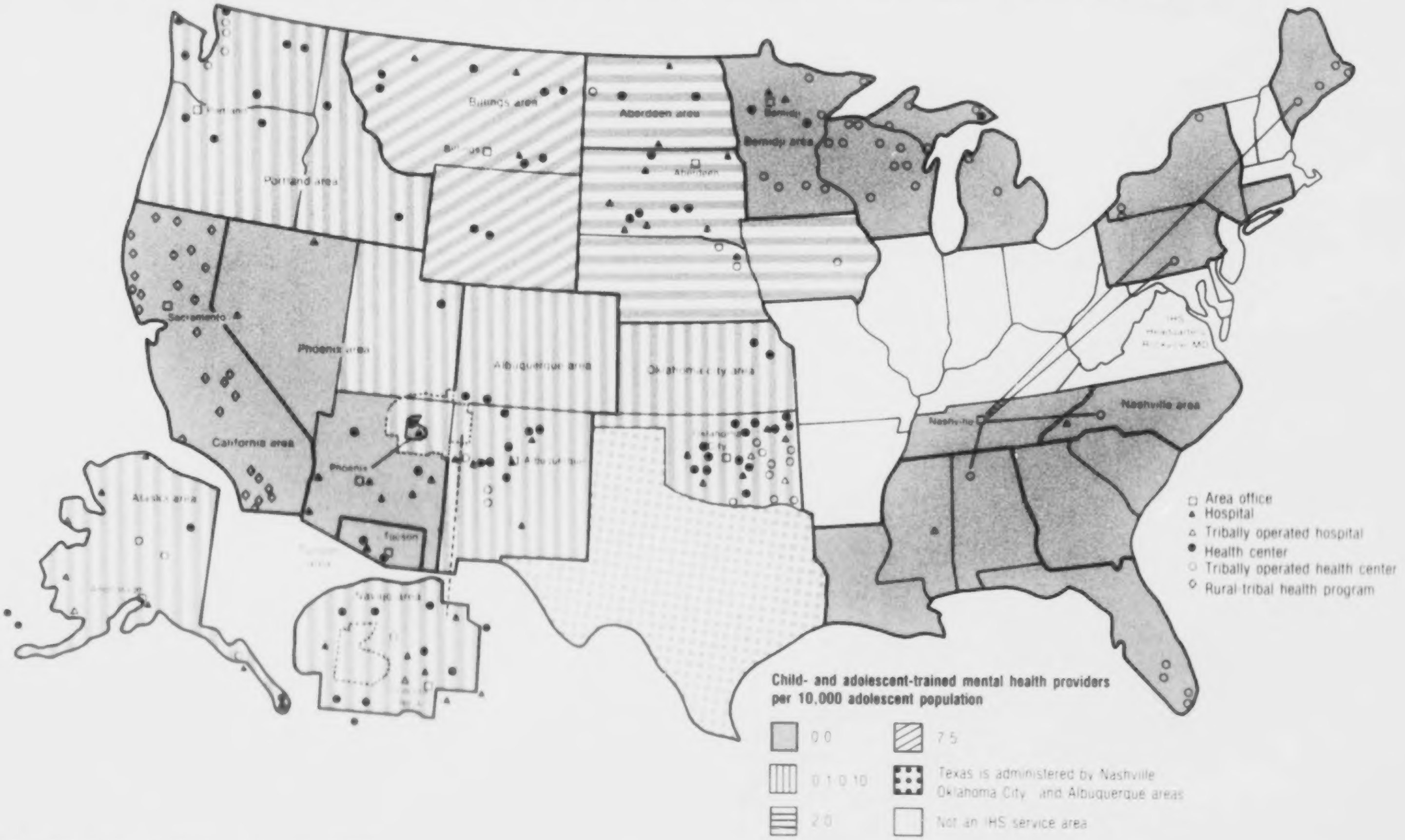
SOURCE: Office of Technology Assessment, 1990.

area; Nashville area; Phoenix area; and Tucson area have no mental health providers trained to work with children or adolescents. The Alaska, Albuquerque, Oklahoma City, and Portland areas have one each. The Aberdeen and Navajo areas have two each. The Billings area has nine. Note that in terms of provider to population ratios, table 1 presents a conservative estimate of the proportion of child- and adolescent-trained mental health providers available to the Indian population by assuming that adolescents aged 10 to 19 would be more likely than younger children to seek mental health care.

There are no comparable data about the full range of child- and adolescent-trained mental health providers (i.e., including psychiatrists, psychologists, social workers, and other mental health professionals) for the U.S. all races population, although some data, as well as a recommended ratio of providers to children, are available regarding child psychiatrists. These data can be extrapolated to suggest that there be a ratio of between 4 and 5 specially trained mental health providers to every 10,000 children 19 and under. If this ratio were applied to the IHS service population, there would be an increase from 17 to approximately 200 specially trained mental health providers for reservation-based Indians alone.

In addition to the expansion of services, important needs are to make any such expansion responsive to the particular needs of Indian adolescents and their communities and to improve coordination among service agencies. Evidence for the effectiveness of mental health treatment adapted to Indian adolescents is lack-

Figure 1—Child- and Adolescent-Trained Mental Health Care Providers for Indian Adolescents by IHS Service Area


Portland
Portland area
Billings area
Billings
Aberdeen area
Aberdeen
Bemidji
Bemidji area
Sacramento
Phoenix area
California area
Albuquerque area
Oklahoma City area
Oklahoma City
Albuquerque
Phoenix
Tucson
Tucson area
Alaska area
Anchorage
Navajo area
IHS Headquarters Rockville MD
Nashville
Nashville area
□ Area office
▲ Hospital
△ Tribally operated hospital
● Health center
○ Tribally operated health center
◇ Rural-tribal health program
Child- and adolescent-trained mental health providers per 10,000 adolescent population
0.0
0.1-0.10
2.0
7.5
Texas is administered by Nashville, Oklahoma City, and Albuquerque areas
Not an IHS service area

SOURCE: Office of Technology Assessment, 1990.

ing, although several promising models exist. There is considerable evidence to suggest that, in general, mental health treatment for children and adolescents can be effective. OTA therefore concludes that in order to meet the unmet mental health needs of Indian adolescents mental health services must be expanded in ways sensitive to the needs of Indian adolescents and their communities.

These and other needs are addressed in the following section on guiding principles and options for a community-based, comprehensive, mental health services system for Indian adolescents.

GUIDING PRINCIPLES AND OPTIONS FOR A COMMUNITY-BASED, COMPREHENSIVE, MENTAL HEALTH SERVICES SYSTEM FOR INDIAN ADOLESCENTS

OTA's evaluation of American Indian and Alaska Native adolescents' mental health needs and the services available to them suggests a number of principles for Congress to consider as it designs legislation to improve the mental and emotional health of American Indian and Alaska Native adolescents. These guiding principles were agreed upon by an OTA panel of experts and are consistent with principles derived by similar groups (e.g., 33,145,253,301,336,341). First, the guidelines are summarized. Then, obstacles to implementation of the guidelines are discussed. Finally, options for congressional consideration are presented.

Guiding Principles

A consensus exists that mental health services for American Indian and Alaska Native adolescents should adhere to the following principles. Mental health services for American Indian and Alaska Native adolescents should:

- be accessible to all American Indian and Alaska Native adolescents, regardless of geographic location or socioeconomic status;
- be adequately funded and staffed;
- be provided within a continuum of care, to include, at a minimum, inpatient treatment in a psychiatric hospital, a residential treatment center, a partial hospital program, and an outpatient service;
- be comprehensive, to include preventive services, treatment, and community education;
- be coordinated within and between service agencies, including non-mental health system agencies, and State, local, and other Federal (non-IHS and Bureau of Indian Affairs (BIA)) agencies;
- be provided in the community to the extent possible;
- include the affected community (including adolescents) in the design, management, and evaluation of services to the extent possible;
- be consonant with the cultural, spiritual, and religious values of American Indian and Alaska Natives;
- be appropriate for adolescents;
- be family-based to the extent clinically possible;
- be based on valid data about the extent of need and availability and effectiveness of services;
- be of high quality; and
- be provided on a timely basis.

Obstacles to Implementing Guiding Principles

Numerous obstacles exist before the guiding principles listed above can be implemented. This brief description of obstacles represents a summary of the service conditions in IHS and in other service systems (e.g., BIA, local, State, and other Federal agencies) described in the body of this report. Several of the conditions described in this section present obstacles to implementing more than one of the guidelines described above. Not every obstacle may be amenable to change through legislation.

Obstacles to Accessibility, Adequate Staffing, Continuous, Comprehensive, and Appropriate Services

Little headway in improving services to adolescents can be made with a total categorical IHS budget of $13 million for mental health services.[4] Only 198 IHS staff members are mental health professionals; only 17 of these are specially trained to treat children and adolescents. There are only 21 inpatient psychiatric beds for Indians; none of these are designated for adolescents. Virtually no partial hospitalization, transitional living, or child residential mental health treatment facilities exist in IHS direct or tribal operations.

Obstacles to Providing Continuous, Comprehensive, and Coordinated Services

Primarily because of funding disputes or inadequate resources, local, State, and Federal programs that are not based in IHS or BIA are unlikely to serve Indians (322). Because they have different objectives (e.g., education and criminal justice for the BIA versus health for the IHS), BIA and IHS programs often are not coordinated. Within the IHS, alcoholism, primary health programs, and mental health services are often not coordinated.

Obstacles to Providing Services Consonant With the Cultural, Spiritual, and Religious Values of American Indians and Alaska Natives

At present, few mental health service providers are Indian, and cultural-sensitivity training of providers is inadequate. Few opportunities exist to train additional Indian mental health providers. Western-trained mental health services providers may be insufficiently sensitive to cultural issues to work effectively with Indian communities. Indian communities may resist some of the prevention and treatment recommendations of Western-trained mental health professionals.

Obstacles to Services' Being Designed by the Affected Community

Many service programs originally under the control of the Federal Government are moving toward community control by Indians themselves. However, numerous problems have beset the full implementation of Indian self-determination (322).[5] Issues common to all health services, including mental health, include the extent to which the IHS contracting process either allows or undermines Indian control. Another generic issue is whether Indian communities have developed the competence to design, manage, monitor, and evaluate their own programs. For mental health services, and the coordination of mental health with other health services, a particular problem is presented by the sometimes different interpretations (by tribes and IHS and BIA professionals) of mental health and emotional problems and their appropriate treatment.

Obstacles to Services' Being Information-Based

With adequate information on the epidemiology and etiology of mental health problems, and on the value and extent of services available to help Indian adolescents with mental health and emotional problems, Indian communities and Federal agencies would be much better equipped to provide appropriate and effective mental health services. Such information is not currently available to Indian communities (322). Epidemiologic, etiologic, and clinical research is needed (88). Such research should be culturally sensitive (see 269).

---

[4] The 101st Congress voted a total appropriation of $21.5 million for IHS mental health programs for fiscal year 1990 (Public Law 101-121). Of this amount, $3.2 million was set aside by Congress for specific activities, $2.5 million was set aside by IHS for specific activities and reserves (including $75,000 for regionally planned training to serve children and adolescents), and the remainder was allocated to area mental health programs to achieve an approximate allocation of $12 per capita (McCoy, G., U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, personal communication, Dec. 21, 1989).

[5] Some of these issues were addressed in the recent amendments to Public Law 93-638 (Indian Self-Determination and Education Assistance Act Amendments of 1988 [Public Law 100-472]).

Obstacles to Assuring Mental Health Services of High Quality

Evaluations of mental health and related services to Indians have been few and far between. Without such evaluations, it is difficult to determine whether services of high quality are being provided.[6]

Congressional Options

Many of the steps Congress could take to improve the mental health of Indian adolescents are expansions of legislation passed in the 100th Congress (e.g., aspects of Public Laws 100-297, 100-472, 100-713) or of changes already begun in the Federal agencies serving Indians (353). Others require substantial infusions of resources.

Options to Increase Both Dollar and Staffing Resources for Mental Health Services for Indian Adolescents Within IHS

- Option 1—Increase categorical funding for IHS for mental health services. IHS's internal deliberations have determined that IHS needs at least twice the amount of funds currently allocated to mental health. If child and adolescent mental health services are to be increased, more funds than that may be needed.
- Option 2—Provide categorical funding for mental health services specifically for Indian children and adolescents.

  Increases in categorical funding would help to ensure that the mental health needs of Indian adolescents are met. However, without an overall increase in funding for IHS, these increases would decrease the flexibility of IHS to meet the other health and mental needs of Indians of all ages. Further, any expansion of services should be teamed with a qualitative change in the service approach, to provide a culturally competent, continuous system of care for children and adolescents.
- Option 3—Provide for a specific level of full-time-equivalent mental health professionals, a portion of whom are to be for children and adolescents. OTA concludes that at least one to two child- or adolescent-trained mental health professionals in each service unit seems necessary, at least initially. Ideally, child- or adolescent-trained professionals would also be available in youth services centers and schools.
- Option 4—Provide for training of non-mental health professionals (e.g., primary care physicians) nurses, and nonprofessional mental health providers (e.g., mental health technicians) to be better observers of the need for mental health sources and better providers of mental health care.
- Option 5—Mandate that a specific portion of Indian Health Professions scholarships (see 25 U.S.C. 1613a) be for students who pledge to work with adolescents.
- Option 6—Expand retention bonuses (25 U.S.C. 1616j) to mental health professionals other than physicians and nurses, and improve retention bonuses for physicians and nurses.
- Option 7—Ensure that the Indian Health Care Improvement Fund (25 U.S.C. 1621) is allocated at least in part to mental health services.

  Currently, it is "approved" but not required for the Secretary to spend Indian Health Care Improvement funds[7] for mental health services.
- Option 8—Provide a mechanism to use underutilized IHS hospital general medical beds for adolescent psychiatric patients.

Options to Increase Funding for Mental Health and Related Services for Indian Adolescents in Non-IHS Programs

The amount of mental health care received by Indian adolescents from non-IHS sources is not known, but it is believed to be very small.

---

[6] The quality of services can also be determined in part by the extent to which services adhere to standards (325). IHS has recently developed national mental health program standards as part of its quality assurance efforts (355); OTA did not evaluate these standards.

[7] In fiscal years 1990 and 1991, $19 million for the Indian Health Care Improvement Fund was authorized, and $29 million for fiscal year 1992 (25 U.S.C. 1621).

Congress could help Indian adolescents receive services from non-IHS sources by providing set-asides for Indian adolescents in general legislation. However, these may not be sensitive to Indian cultures, and so may not be used by Indian adolescents unless some provision is made to increase the sensitivity of non-IHS service providers.

Precedent for set-asides for Indians, including Indian adolescents, exists. For example, recent legislation designed to combat alcohol and drug abuse (the Drug-Free Schools and Communities Act [Section 5112(a)(2) of the August F. Hawkins-Robert T. Stafford Elementary and Secondary School Improvement Amendments of 1988 (Public Law 100-297)][8]) reserved 1 percent of the authorized funds for drug education and prevention programs for Indian youth. As another example, the Indian Education Act of 1988 (Title V, Part C, of Public Law 100-297) provided financial assistance to local education agencies to develop and carry out elementary and secondary school programs specially designed to meet the special education and culturally related academic needs of Indian students. Vocational rehabilitation legislation allows for the making of grants to Indian tribes (29 U.S.C. 750). Set-asides and mandated funding would ensure that Indian adolescents are included in innovative programs available to non-Indians.[9]

- Option 9—Provide set-asides for Indian adolescents in general legislation, such as the Alcohol and Drug Abuse and Mental Health Block Grant (Public Law 100-690), Juvenile Justice and Delinquency Prevention Act (Public Law 100-690), Vocational Rehabilitation Act, Sec. 130, and Maternal and Child Health (MCH) Services Block Grant (Title V of the Social Security Act).[10]
- Option 10—Clarify the intent of Public Law 98-509, which permits the United States Department of Health and Human Services (U.S. DHHS) to provide alcohol, drug abuse, and mental health (ADM) block grant funds directly to Indian tribes.

  Public Law 98-509 permits U.S. DHHS to provide ADM block grant funds directly to Indian tribes (42 U.S.C. 300x-1a(b)(1)). However, paragraph 2 of the same section of the U.S. Code limits the amounts to be so distributed to Indian tribes to "the amount which bears the same ratio to the State's allotment for the fiscal year involved as the total amount provided or allotted for fiscal year 1980" (42 U.S.C. 300x-1a(b)(2)). Thus, unless tribal organizations applied for and received such grants in fiscal year 1980, they are ineligible to take advantage of this provision (245).
- Option 11—Mandate services to Indian adolescents under Federal programs such as Medicaid (Title XIX of the Social Security Act).

  There are already precedents for this in other acts. For example, States are required to provide vocational rehabilitation services to American Indians with disabilities residing in a State to the same extent as the State provides such services to other significant segments of the resident population of individuals with disabilities residing in the State (29 U.S.C. 721(B)(20)). States are also required to consult with Indians in the development of State plans (29 U.S.C. 721(B)(20)).

---

[8] The legislation permitted the Department of Education (DoEd) to contract with Indian tribes, using the provisions of the Indian Self-Determination Act. (Section 5133 of Public Law 100-297).

[9] For example, the ADM Block Grant mandates that at least 10 percent of mental health funds be used to provide services and programs for seriously emotionally disturbed children and adolescents (Public Law 100-690, Sec. 2033(A)). Half of this amount is to be used to provide new or expanded services and programs (Public Law 100-690, Sec. 2033(B)).

[10] The Maternal and Child Health (MCH) Services Block Grant provides health services to mothers and children, particularly those with low income or limited access to health services. The purposes of the block grant include reducing infant mortality; reducing the incidence of preventable disease and handicapping conditions among children; and increasing the availability of prenatal, delivery, and postpartum care to low-income mothers. Mothers and children whose incomes fall below the poverty level may not be charged for services. States determine the services to be provided under the block grant. In fiscal year 1987, $478 million was appropriated for the MCH Block Grant.

Options to Provide for, and Evaluate the Effectiveness of, Alternative Models for Access to Mental Health Services

Even if overall resources and staffing were improved, small community sizes and wide geographic distribution of Indian populations would make the provision of professional mental health services difficult. Some Indian communities are located in rural areas where mental health services are not available from anyone. Thus, alternative models for access are needed, such as mobile practitioners, additional use of the village support worker model, consultation and technical assistance to indigenous mental health workers, and transportation to available services. In general, the effectiveness of these alternative methods has not been evaluated.[11] A precedent exists in legislation providing for grants to local educational agencies (LEAs) for the cultural enrichment of Indian children; this legislation allows for funds to be used for pilot projects to demonstrate effectiveness of these models (Title V, Part C, of Public Law 100-297).

- Option 12—Provide for demonstration projects for alternative models for access to mental health services, such as mobile practitioners, additional use of the village support worker model, consultation and technical assistance to indigenous mental health workers, and transportation to available services.

Options to Support Intra- and Inter-Agency Coordination for Mental Health Problems

- Option 13—Mandate coordination of child and youth services at the highest levels of the IHS, the BIA, other Federal youth services programs, and States in which Indians reside.

The programs to be coordinated could include, but not be limited to:

—IHS mental health, maternal and child health, alcohol and drug abuse, community health nursing, CHR, and health education programs;

—Child Sexual Abuse Treatment Demonstration Programs (25 U.S.C. 1680i);

—BIA Juvenile Detention Centers (25 U.S.C. 2453 [4220 subsection b])[12];

—BIA Model Indian Juvenile Code (25 U.S.C. 2454);

—BIA Office of Alcohol and Substance Abuse Indian Youth Programs (25 U.S.C. 2413(c));

—IHS regional youth detoxification and treatment programs (25 U.S.C. 2474(a); 25 U.S.C. 2474(b));

—IHS community-based rehabilitation and follow-up services for Indian youth who are alcohol and substance abusers (25 U.S.C. 2474(d)).[13]

Precedent for such coordination exists. For example, Public Law 99-570 required that a memorandum of agreement be developed between IHS and the BIA that would identify the scope of alcohol and substance abuse problems among Indian youth; identify relevant resources and programs of the BIA, the IHS, and other Federal, tribal, State, local, and private resources; develop and establish appropriate minimum standards for each agency's program responsibilities; and coordinate BIA and IHS alcohol and substance abuse programs (25 U.S.C. 2411; 25 U.S.C. 2431; 25 U.S.C. 2433; 25 U.S.C. 2441).[14]

---

[11] Public Law 100-690 authorized funds for Community Health Representatives, but did not require that their effectiveness be evaluated.

[12] For example, Public Law 100-690 legislated that the IHS "shall not refuse to provide necessary interim treatment for any Indian youth referred pursuant to subsection (a) who has been charged or is being prosecuted for any crime unless such referral is prohibited by a court of competent jurisdiction or the youth is determined by a court of competent jurisdiction to be a danger to others" (Public Law 100-690, Title II, Sec. 2210).

[13] Includes a provision that mental health professionals are to run services.

[14] Another provision required immediate medical examination by IHS (direct or contract care) of juveniles arrested for alcohol or substance abuse to determine the juvenile's mental or physical state (25 U.S.C. 2452(a)).

Options to Provide for Community Involvement in the Design and Implementation of Mental Health Services and to Increase the Ability of Indian Communities to Design and Implement Mental Health Programs Responsive to Their Own Needs and Consonant With Their Community Values

Indian participation in the design of services is a major theme of recent legislation, but such control primarily takes the form of turning over responsibility for the delivery of services to Indian tribes themselves. Indians could also increase their participation in the design of services delivered directly by the IHS. In this way, Indians could gain experience in designing and delivering programs at the same time the programs would become more responsive to Indian needs. Precedent for such participation exists, for example, in legislation providing for grants to LEAs for the cultural enrichment of Indian children (Title V, Part C, Section 5314 of Public Law 100-297, The Tribally Controlled Schools Act of 1988). This legislation requires that programs be developed and operated with the participation of parents of Indian children, teachers, and where applicable, secondary school students themselves.[15] Public Law 99-570 authorized $1 million a year (for each of fiscal years 1989, 1990, 1991, and 1992) for BIA grants to tribes for development of Tribal Action Plans to coordinate available resources and programs to combat alcohol and substance abuse among tribal members (25 U.S.C. 2412(d)). In general, U.S. DHHS is to provide technical assistance directly to tribes and to make grants to tribes for obtaining technical assistance from entities other than IHS (Public Law 100-472).

An example of legislation that goes further in helping to train tribal leaders is the provision in Public Law 100-713 for demonstration projects for tribal management of health care services (25 U.S.C. 1680h). Importantly, during the demonstration period, the Secretary was to award all health care contracts (including community, behavioral, and preventive health care contracts) to the Indian tribe in the form of a single grant (25 U.S.C. 1680h(b)), and was permitted to waive provisions of Federal procurement law.[16] An evaluation of the demonstration project is required.

- Option 14—Mandate a mental health programs advisory board in every service unit and area office of the IHS, and at the IHS headquarters level. It would be important that the Mental Health Programs advisory board integrate its activities with advisory boards for other health and social problems.

  The 1984 IHS Ad Hoc Group on Mental Health recommended that a standing IHS Mental Health Council be formed but the IHS and the Health Resources and Services Administration (HRSA)[17] rejected that recommendation (265).
- Option 15—More adequately specify the mental health aspects, if any, of the evaluation component of the tribal management demonstration project authorized in 25 U.S.C. 1680h.

Options to Improve the Sensitivity of Mental Health Providers to Cultural, Religious, and Spiritual Considerations in Mental Health Services Delivery

Precedents for implementing this option include the Indian Education Act of 1988, which authorizes grants to prepare teachers, social workers, and ancillary personnel to serve Indian students (Public Law 100-297). Public Law 100-713 requires the IHS to establish a program to provide educational instruction in the history and culture of "particular Indian tribes" to appropriate employees (25 U.S.C. 1616f). A similar provision requires training for Community Health Representatives to "promote traditional health care practices of the Indian tribes served consistent with the [Indian Health] Service standards for the provision of health care, health promotion, and disease prevention'' (25 U.S.C. 1616(b)(2)(B)(6)).

---

[15] In introducing the need for tribally controlled schools, Congress stated that "true self-determination in any society of people is dependent upon an educational process which will ensure the development of qualified people to fulfill meaningful leadership roles" (25 U.S.C. 2501).

[16] Provided that any such waiver "does not diminish or endanger the delivery of health care services to Indians."

[17] In 1984, IHS was part of the HRSA; it has since been elevated to agency status.

- Option 16—Require that training under the tribal culture and history program of Public Law 100-713 (25 U.S.C. 1616f) be provided to all mental health professionals, particularly those who work with children and adolescents.

Options to Make the Delivery of Mental Health Services to Indian Adolescents Information-Based

More efficient collection and sharing of information by IHS and BIA would assist Indian communities, the IHS, and BIA to design programs and evaluate their effectiveness. Epidemiologic, service, and effectiveness data are necessary. For example, the BIA is required to provide IHS, affected tribes, and Tribal Coordinating Committees with data relating to ''calls and encounters, arrests and detention, and disposition of cases by BIA or tribal law enforcement or judicial personnel involving Indians where it is determined that alcohol or substance abuse is a contributing factor'' (25 U.S.C. 2455), and with data on child abuse and neglect cases (25 U.S.C. 2434(b)).

- Option 17—Mandate the regular collection of epidemiologic data about the mental and emotional health status of Indian adolescents, perhaps beginning with demonstration projects.
- Option 18—Mandate the timely sharing of IHS and BIA service data with tribes.
- Option 19—Expand the provision of information required in 25 U.S.C. 2475 and 25 U.S.C. 2455 from information about alcohol and substance abuse to information about other mental and emotional health problems.
- Option 20—Mandate and support evaluation studies of IHS and BIA programs related to the mental and emotional health of Indian adolescents. Precedent for this approach is included in Public Law 99-570, which required that pilot programs monitor the effectiveness of summer youth programs in furthering the prevention of alcohol and substance abuse (25 U.S.C. 2431(a)).
- Option 21—Provide for involvement of Federal research agencies in basic and applied research on mental health problems and service needs of Indian adolescents. For example, issues relevant to Indian adolescents could become part of the National Plan for NIMH-sponsored Child and Adolescent Mental Disorders Research (144).

There can be no doubt that the mental and emotional health problems of Indian adolescents need to be addressed, and that the potential exists for helping Indian adolescents to improve the quality of their lives and reach a satisfying and productive adulthood. The discussion above of precedents for congressional options suggests that the Federal Government has shown its willingness to commit resources to mitigating the problem of alcohol and substance abuse among Indian youth. However, alcohol and substance abuse may be symptoms of other severe problems among Indian youth. A similar commitment to the mental and emotional health needs of adolescents and their families before they are manifested as alcoholism and substance abuse may be equally effective.

ORGANIZATION OF THE SPECIAL REPORT

This Special Report focuses on current knowledge about the mental health problems of American Indian and Alaska Native adolescents and the service systems that have evolved to treat such problems.

Chapter 2 considers mental health problems of American Indian and Alaska Native adolescents along a continuum ranging from diagnosable mental disorders through serious mental health concerns to stressful life events. Where possible, underlying causes have been highlighted and rates compared to those of the general adolescent population. The chapter closes by outlining the most pressing information needs and the challenges that to be faced in addressing them.

Chapter 3 focuses on the nature and scope of mental health care that is available to Indian adolescents. It opens with a synopsis of the Federal, tribal, urban Indian, State, and local systems that play major roles in the delivery of services to adolescents. The report then outlines the various treatment settings that constitute a continuum of care, which represents the optimal framework for organizing and coordinating the necessary array of interventions. It next describes the spectrum of treatment modalities, considers their current status in Indian programs, and provides specific examples.

The report subsequently turns to preventive and promotive interventions, and summarizes the salient characteristics of those reported in the published literature as well as those identified by a field survey of actual practice. The related needs for sensitivity to the variety of Indian cultures and values and to community involvement are also addressed in this chapter. This section closes on the need to develop a more articulated, responsive, and comprehensive system which capitalizes on the best of all available means of intervention and personnel. Appendix A summarizes a number of earlier evaluations of the mental health needs of Indian adolescents.

The primary focus of this Special Report is on Indian adolescents from 10 to 19 years of age. Younger children inevitably have been included in some areas of discussion, largely as a function of antecedent conditions that become manifest as mental health problems in adolescence. Notable examples include developmental disabilities and fetal alcohol syndrome.

The Special Report is somewhat limited in that some areas of mental health concern have engendered surprisingly little research and even less published material. Consequently, information sources are limited and often difficult to access. In addition, understanding of the mental health problems of childhood and adolescence is in flux. There is not the same clarity about such phenomena among youth as there is among adults. Finally, and perhaps most important to an analysis of Indian mental health issues, with rare exceptions the IHS, BIA, tribal, and urban Indian health care program utilization data do not lend themselves to ready analysis of mental health problems.

Chapter 2

Mental Health Problems of American Indian and Alaska Native Adolescents

The following discussion of mental health problems among American Indian and Alaska Native youth has been organized in terms of a continuum of concerns. It begins first with problems that are considered diagnosable mental disorders. Diagnosable mental disorders represent serious difficulties that are usually associated with readily observable distress or functional impairment. Examples include developmental disabilities, depression, anxiety, and substance abuse and dependence. DSM-III-R, the Diagnostic and Statistical Manual, Version Three (Revised) of the American Psychiatric Association (12), provides a widely accepted, although not uncontroversial, nomenclature for describing and classifying such mental health problems (323).

The discussion then turns to still serious, but less diagnostically specifiable problems of childhood and adolescence. These include school dropout, delinquency, and runaway youth. Many mental health professionals assume that these types of problems either mask, are caused by, or lead to the psychological dysfunction and illness embodied in the major mental disorders.

The last portion of the discussion provides a broader view of the stresses that Indian adolescents experience and that, consequently, may render them more vulnerable to serious mental and emotional problems in question.

The causes of most childhood mental health problems remain unknown (144,323). However, related risk factors, often multiple and interlocking, are noted in the context of each mental health problem reviewed.

DIAGNOSABLE MENTAL DISORDERS

A significant portion of DSM-III-R is devoted to disorders usually first evident in infancy, childhood, or adolescence. Other mental disorders may afflict children and adolescents but are usually more common in adults. The weight of clinical experience suggests that most DSM-III-R disorders are represented at least as frequently among American Indian and Alaska Native adolescents as in the adolescent population at large. Clinical experience, and some research evidence, suggests that several disorders may occur more frequently among Indian adolescents. These include mental retardation, specific developmental disorders, post-traumatic stress disorder[1], identity disorder, substance use/abuse disorder, depression disorders, and adjustment disorders.[2] Anorexia nervosa and bulimia nervosa would appear to be less frequent among Indian adolescents. More valid estimates of the extent of diagnosable mental disorders among Indian adolescents (and non-Indian adolescents) await systematic epidemiologic study.[3]

Developmental Disorders

The prevalence of mental retardation and other developmental (disabilities among Indian adolescents is not well established, although several studies suggest that they occur with greater frequency in this population than in others (238,262; see table 2). Based in large part on sources published before 1979, the Native American Rehabilitation and Training Center concluded that neurosensory disorders and certain developmental disabilities appear to be from 4 to 13 times greater for American Indians than for the U.S. population in general (234a).

A more recent analysis of national data from 1984 found smaller differences (238; table 3). However, this study found that almost 10 percent of American Indian students in public schools had some form of developmental disability. O'Connell reported that, for the Nation as a whole, the frequency of learning disabilities was greatest for American Indians among public school students (5.28 percent of all Indian students, compared to 4 percent for all minorities on average and slightly more than 4 percent for Anglo students). Indian students were second only to blacks in the proportion of educable and trainable mentally retarded. O'Connell and her colleagues also analyzed BIA data gathered in 1986; these data suggested that 8.72 percent of those enrolled had

---

[1] Not discussed in this Special Report because of a lack of research evidence.

[2] Not discussed in this Special Report because of a lack of research evidence.

[3] The U.S. DHHS NIMH hopes to make such a study one of its 1991 initiatives (248).

Table 2—Studies Generating Estimates of Developmental Disabilities Among Indian Children and Adolescents

Study[a]	Setting	Sample	Method	Findings
Reschly and Jipson, 1976	Public schools Pima County AZ	Students; K-12; stratified random sample	WISC-R	14% Papago 8% Black 6% Hispanic 2% White mental retardation
Ramiriz and Smith, 1978	BIA schools, nationwide	Students; K-12	Staff survey	38%; all handicapping conditions
Joe, 1980	Navajo Nation	Disabled tribal members identified by multiple sources in IHS, BIA, and tribes; average age = 12 years	Survey	Percent males more than percent females; 5% educable mentally handicapped; 12% developmental disabled; 34% learning disabled; 10% multiply handicapped
May, 1983	MH programs IHS Albuquerque Area Office	Clients 10- to 19-years old 1981 (n = 2,168) 1982 (n = 3,540)	Service utilization review	5% (1981) 4.4% (1982) mental retardation

[a] References are located at end of report.

SOURCE: Office of Technology Assessment, 1990.

Table 3—School-Related Handicapping Conditions of Ethnic Minorities, 1984

	Percent of ethnic group with disability					
Disability category	American Indian	Asian	Hispanic	Black	Total minority	Anglo
Educable mentally retarded	1.34%	0.33%	1.02%	2.62%	1.90%	0.92%
Trainable mentally retarded	0.32	0.18	0.25	0.38	0.32	0.25
Speech impairment	2.33	1.34	1.76	2.20	1.99	2.50
Severely emotionally disturbed	0.61	0.12	0.39	0.85	0.64	0.70
Learning disabled	5.28	1.66	4.14	4.26	4.01	4.14
Totals	9.88%	3.63%	7.56%	10.31%	8.86%	8.51%

SOURCE: J.C. O'Connell (ed.), "A Study of the Special Problems and Needs of American Indians With Handicaps, Both On and Off the Reservation," report prepared for the Office of Special Education and Rehabilitation Services, U.S. Department of Education, 1987.

learning disabilities alone (238). These data suggest that developmental disabilities are a serious problem among Indian adolescents. There is evidence to suggest that they are related to the high prevalence of otitis media and fetal alcohol syndrome among Indian children (discussed below).

Depression

Depression—whether taken as a set of nonspecific symptoms of psychological distress which includes sadness, or as a psychiatric disorder with characteristic symptoms, course, and prognosis—has long been a concern with respect to Indian adolescents. Numerous clinicians and investigators argue, for example, that many behavioral difficulties such as conduct disorder, learning problems, or even substance abuse may reflect underlying depression (50). Unfortunately, the systematic study of depression among adolescents in general, much less their Indian counterparts, has advanced more slowly than among adults. This lag is largely due to still-evolving theories about depression in childhood which must account for highly situational stresses and fluctuating maturational processes (323). It is not surprising, then, that the available diagnostic tools are neither as well-tested nor widely applied as comparable methods for adults.

Nonetheless, depression is frequently cited among the troubles experienced by Indian youth. As shown in table 4, of the studies comparing the level of depression among Indian adolescents with a sample of non-Indians (3,170,366), most reported more depression among Indian adolescents. The total prevalence of depression among Indian adolescents

Table 4—Studies Generating Estimates of Depression Among Indian Adolescents

Study[a]	Setting	Sample	Method	Findings
Studies using screening instruments for depressive symptoms:				
Kleinfeld and Bloom, 1977	BIA boarding school (Alaska)	Eskimo students grade 9 (n = 132)	Self-report survey; HOS;[b] Symptom check-lists	49% of student body emotionally disturbed, including depression (25% serious)
Manson, Ackerson, Dick, et al., in press	Tribally administered boarding school (Southeastern U.S.)	Students grades 9-12 (n = 188) age range 12-20; average age 16	Self-report survey using CES-D[c]	58% met cutoff
NCAIANMHR, College Student Life Transitions Project, 1989	State-supported university (AK, MT, NM, AZ)	College students, (n = 605) age range 17-54; average age 25	Self-report survey using CES-D	48% met cutoff; no significant difference between males and females; slightly more than white students
University of Minnesota, IAHS, 1989	Schools (Plains, Southeast, Southwest)	7th-12th grade students	IAHS[d]	20% report being "depressed" in the last month[e]; 34% report feeling "sad, discouraged, hopeless"[f]
Surveys of practitioners:				
Development Associates, 1983	Title IV counseling programs	1st-12th grade students	Survey of counselors	56% reported students were frequently troubled by depression (fifth most frequent problem)
Studies using mental health service utilization review:				
Beiser and Attneave, 1982	Mental health programs (nationwide) (1974)	Mental health clients 15 to 19	Chart review	8% of all females
May, 1983	Indian Health Service mental health program (Albuquerque area)	Mental health clients 10 to 19 yrs old (n = 1,898) 1981 (n = 3,541) 1982	Chart review	3.3% (1981) 3.2% (1982)
Studies using diagnostic criteria for clinical depression in self-report surveys:				
Krush, Bjork, Sindell, et al., 1966	BIA boarding school (South Dakota)	Northern Plains students grades 11-12 (n = 222)	MMPI[g] CPI[h]	Significantly more than non-Indians[i]
Ackerson, Dick, Manson, et al., in press	Tribally administered boarding school (Southeastern U.S.) (1987-88)	Students grades 9-12 (n = 177) age range 12-20; average age 16	self report survey (IDD)[j]	5.3% met criteria; no significant difference between males and females; slightly more than white students

[a] References are located at end of report.
[b] Health opinion survey.
[c] Center for Epidemiologic Studies—Depression Scale.
[d] Indian Adolescent Health Survey.
[e] More males (21%) reported feeling depressed than females (18.8%). The percent feeling depressed was approximately the same as in the Minnesota sample.
[f] More females (38.1%) than males (29.4%) reported feeling sad, discouraged, or hopeless. Indian students were more likely than Minnesota students (approximately 20%) to report feeling sad, hopeless, or discouraged in the last month.
[g] Minnesota Multiphasic Personality Inventory.
[h] California Psychological Inventory.
[i] Did not report data.
[j] Inventory to Diagnose Depression.

SOURCE: Office of Technology Assessment, 1990.

cannot be calculated from existing studies because the studies used different methods for estimating depression. When self-report screening methods are used, half or more of Indian adolescents report serious depressive symptoms (166,190,232,233). Not surprisingly, when the more restrictive diag[illegible]tic criteria for clinical depression are used, the proportion of Indian adolescents found to be depressed is smaller (3,29,202). Based on these geographically diverse data, rates of depression among Indian adolescents do not appear to differ by area, although not all Indian areas are represented in the research base.

Some researchers have concluded that boarding school environments contribute to depression among Indian adolescents (166,170). Much of the research has been conducted with boarding school populations, so it is difficult to disaggregate the effects of boarding schools from other risk factors for depression.[4]

Overall, the numbers of Indian adolescents reporting depressive symptoms provide cause for concern.

Suicide

Suicide is perhaps the most tragic manifestation of mental health problems among Indian adolescents. An attempted suicide by an adolescent is a distinct call for help. This section provides information about the extent of the suicide problem among Indian adolescents and discusses the individual and environmental risk factors that are known or believed to be associated with Indian adolescent suicide.

Suicide Deaths

Suicide is the second leading cause of death for American Indian and Alaska Native adolescents. In 1986, the age-specific mortality rate for suicide for 15- to 19-year old Indians was an estimated 26.3 deaths per 100,000 population (table 5).[5] In comparison, the figure for the same age group for U.S. all races was 10.0 per 100,000 population. Suicide deaths for 10- to 14-year olds are approximately four times higher than that for U.S. all races.

For 15 to 19 year olds, age-specific death rates from suicide have decreased somewhat from 30.9 in 1980 to 26.3 in 1986; however, rates for 10 to 14 year olds have increased steadily (table 5).

As with the general population, death from suicide is more likely to affect Indian males because males are more likely than females to use particularly lethal methods such as shotguns and hanging. In 1986, the death rate for adolescent males 10 to 19 was approximately 10 times higher than for females of the same age. Suicide deaths for Indian females aged 10 to 19 climbed steadily during the first part of the 1980s, peaking in 1985 with 9.0 deaths per 100,000 population. In contrast, the figure for U.S. all races females aged 10 to 19 was 2.3 deaths per 100,000 population. In 1986, the rate for Indian females dropped to 3.4 deaths per 100,000, while the rate for U.S. all races females remained somewhat level at 2.2 deaths per 100,000.

While suicide is the second leading cause of death for Indian adolescents, the actual number of deaths is relatively low (e.g., 30 deaths among 10- to 19-year-old Indians in 1986). At the area level, these numbers are considerably smaller. Therefore, any area-specific death rates for suicide, even with reliable population estimates, are subject to large fluctuation on a year-by-year basis.

Suicide Attempts

Suicide deaths provide only one dimension of the problem of adolescent suicide. For every suicide, there are many more suicide attempts. Hospital admissions and self-reports by adolescent provide some information on suicide attempts.

In 1988, there were 424 hospitalizations in IHS or contract health care facilities (discharges also include deaths) for adolescents age 10 to 19 which involved a suicide attempt (ICD-9 suicide E-code) (table 6). Seventy percent (298) were females, with the majority (55 percent) of female suicide discharges among 15 to 17 year olds. Ingestion of pills was the most common method of attempt (94 percent) (351). Likewise, nearly half (47 percent) of all suicide discharges for males were for 15 to 17 year olds.

While ingestion of pills was also the most common method of attempted suicide for males (74 percent), males were more likely than females to attempt suicide via hanging (4 percent), firearms (10 percent), or cutting (10 percent). Younger males (10 to 14), however, tended to use less violent means than those in the 15- to 19-year-old age range.[6]

---

[4] It may be possible to compare responses to relevant items for depression among students in different types of schools participating in the University of Minnesota Indian Adolescent Health Survey (366). However, no off-reservation boarding schools were included in the IAHS.

[5] Estimating death rates for Indians in IHS service areas is difficult because of uncertainty in the population denominator. OTA's method of estimating the Indians adolescent-population is described in app. B. For additional details concerning problems with IHS data sources, see U.S. Congress, OTA (322).

[6] Comparable data on suicide methods for non-Indian youths are not available because the use of ICD-9 E-codes is optional on hospital discharges.

Table 5—Indian and U.S. All Races Age-Specific Suicide Death Rates per 100,000 Population, 1980-86

	Indian				U.S. all races			
	Age 10-14	Age 15-19	Ages 10-19		Age 10-14	Age 15-19	Ages 10-19	
			Males	Females			Males	Females
1980	0.0	30.9	29.7	2.1	0.8	8.5	7.5	1.6
1981	2.2	30.4	28.1	5.3	0.9	8.7	7.4	2.0
1982	2.2	19.6	16.9	5.4	1.1	8.7	7.9	1.8
1983	4.5	30.4	27.8	7.7	1.1	8.7	7.6	1.9
1984	2.3	33.0	27.1	8.9	1.3	9.0	7.1	2.0
1985	5.7	35.7	33.0	9.0	1.6	10.0	9.1	2.3
1986	6.9	26.3	29.8	3.4	1.5	10.2	9.3	2.2

SOURCES: **Indian:** Office of Technology Assessment, 1989, calculated from U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, unpublished mortality data, Rockville, MD, 1989; **U.S. all races:** U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Center for Health Statistics, unpublished mortality data from table 292A, "Deaths From 282 Selected Causes," Hyattsville, MD, no date.

Table 6—Percentage of IHS and Contract Care Hospital Discharges for 10- to 19-Year-Olds Involving a Suicide "E-Code," 1980-88

	1980	1981	1982	1983	1984	1985	1986	1987	1988
All areas[a]	2.6%	2.8%	2.7%	2.9%	3.1%	3.2%	3.9%	3.7%	4.3%
Aberdeen	3.5	3.2	4.3	4.0	4.9	4.6	5.5	7.6	6.5
Alaska	2.9	3.9	3.3	2.8	4.2	3.1	4.5	4.4	3.1
Albuquerque	3.1	4.2	3.0	4.3	2.4	4.1	4.4	4.2	6.3
Bemidji	3.7	3.2	3.6	7.3	4.0	8.1	11.2	9.7	15.5
Billings	1.9	1.8	1.1	1.2	1.7	2.7	4.0	3.1	5.5
Navajo	2.4	2.1	2.3	2.4	2.5	2.2	3.0	2.5	3.1
Oklahoma City	0.9	1.1	0.6	1.2	0.8	0.7	0.9	1.2	1.3
Phoenix	9.0	4.7	3.8	4.1	5.2	4.4	4.9	3.6	5.2
Portland	0.7	0.5	0.9	0.2	1.9	1.3	2.1	3.3	4.4
Tucson	0.9	0.6	2.9	3.3	1.8	1.1	2.5	2.8	4.1

[a] Includes Nashville in total. Individual data on Nashville not presented since one IHS hospital became a "638" (tribally run) facility during this period.

SOURCE: U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, Rockville, MD, unpublished IHS hospital discharge data, 1989.

During the period 1980-1988, adolescent hospital discharges involving a suicide E-code increased from 2.6 percent of all discharges to 4.3 percent (table 6).

Because of the way IHS maintains ambulatory care data, it is not possible to know how many adolescents were referred for mental health services in conjunction with a suicide attempt.

For every hospitalization for a suicide attempt, there are many more which never become part of the system. Some of these attempts may be suicide gestures with minimal health risk; others may be more serious. Still, suicide attempts often go undetected by parents or the medical community. Because suicide is such a major problem in Indian and Alaska Native communities, a recent survey of Indian adolescents (the Indian Adolescent Health Survey [IAHS]) included a number of questions pertaining to suicide attempts of respondents and friends. For this Special Report, only a subset of IAHS data, collected from approximately 2,700 students in some Plains, Southeast, and Southwest tribes, is available.[7]

---

[7] In general, in analyzing data from the IAHS, several points must be kept in mind. First, the data are a subset of 2,672 respondents drawn from the larger IHS survey which is still not complete. (Approximately 15,000 students completed surveys as of the end of spring 1989 but not all of these data were available at the time this special report was being prepared; an additional 3,000 additional surveys will be completed in the future.) Secondly, while the data may be indicative of trends in Indian adolescent health behavior they are not necessarily representative of all Indian adolescents. The subset used for this analysis involves a limited representation of students, primarily in Southwestern tribes; it does not include Alaska Native youth because survey work in Alaska was still in progress when this special report was being prepared. Also, the data are self-reported. While this method may be an acceptable one for collecting sensitive information regarding behavior and thoughts that only the respondent is aware of, there is the potential that items may not be answered truthfully. Extensive edits to detect false responses were performed on the data. However, it is not possible to detect false response patterns for all questions. Despite this latter limitation, the IAHS responses show remarkable consistency in response patterns when compared to other groups who have used a comparable instrument. Because a nearly identical survey was completed by over 36,000 Minnesota adolescents in grades 7 through 12 (365), data from the IAHS can be compared to this larger group. A third limitation of the IAHS (and MAHS) was that data collection was limited to students and does not include adolescents who have left school.

Table 7—Percentage of Indian and Minnesota Adolescents in Grades 6 Through 12 Ever Attempting Suicide

	Males		Females	
	Number	Percent	Number	Percent
Indian Adolescent Health Survey				
Total	150	11.6%	276	20.3%
Southwestern tribes	64	11.3	106	18.3
Plains tribes[a]	69	12.8	136	23.1
Southeastern tribes[a]	17	8.2	34	16.7
Minnesota Adolescent Health Survey[a]				
Metro	936	7.7	1,846	16.0
Greater Minnesota	372	5.9	829	13.2

[a] Only surveyed grades 7 through 12.

SOURCES: **Indian Adolescent Health Survey**: University of Minnesota, Adolescent Health Program, Indian Adolescent Health Survey, unpublished preliminary data, 1989; **Minnesota Adolescent Health Survey**: University of Minnesota, Adolescent Health Program, Minnesota Adolescent Health Survey, unpublished data, 1987.

Nearly 12 percent of Indian males and 20 percent of Indian females in the IAHS subset (see table 7) indicated that they had ever attempted suicide. This compares with 7 percent of males and 14 percent of females in the Minnesota Adolescent Health Survey (ratios of 1.7 and 1.4, respectively). Data from the National Adolescent School Health Survey, based on a representative national sample of adolescents in grades 8 and 10, show that just over 11 percent of males and 17 percent of females had ever attempted suicide (9).[8]

Less than one-fifth of Indian adolescents indicated that they sought medical care after their last suicide attempt, an item included to assess the seriousness of the attempt. Of those who did not seek medical care, over a fifth of females indicated that they told their best friend about their attempt. However, nearly the same proportion indicated they told no one. Males were more likely to not tell anyone about their attempt (366).

Over half of the males and females who reported having tried to kill themselves indicated that they had attempted to kill themselves more than once. Not surprisingly, Indian adolescents who had previously attempted suicide were much more likely than those who hadn't attempted suicide to indicate that they continued to have suicidal thoughts (table 8).

Clearly, adolescents who have attempted suicide once are in need of some kind of intervention. Thus, it may be encouraging that Indian adolescents who have previously attempted suicide were more likely than those who hadn't to indicate that they had ever received mental health care (see table 8). However, the extent and effectiveness of such care cannot be determined from the IAHS survey. It is noteworthy that 75 percent of adolescents who had attempted suicide report that they received no mental health care.

Completed suicides and suicide attempts of others can have a profound impact on a wide range of individuals, particularly in small communities such as those on reservations. Nearly one-third of females and one-fifth of males indicated that a friend had attempted suicide. One out of ten Indian adolescents reported that a friend had actually died from suicide. About one-fifth of those surveyed in the IAHS indicated that a family member had either committed or attempted suicide (table 9).

Risk Factors for Indian Adolescent Suicide

A wide range of individual risk factors has been considered in regard to Indian suicide (288). Frequent interpersonal conflict (209,226,273), prolonged, unresolved grief (79,150), chronic familial instability (86,206,263,304), depression (234,307), alcohol abuse/dependence (379) and unemployment (291,314,315,318) have been shown to be major correlates of this phenomenon. In addition, a family history of psychiatric disorder—particularly alcoholism, depression, and suicide—often has been noted (286).

The suicide rate also is higher among Indian adolescents who have been seen for psychiatric problems, who have physical illnesses, who have

---

[8] The average rates in the Minnesota (MAHS, IAHS) and National Adolescent School Health Survey (NASHS) differ because NASHS restricted its sample to older students. Older adolescents are more likely than younger ones to attempt suicide.

Table 8—Percentage of Indian Adolescent Suicide Attempters and Non-Attempters Having Suicidal Thoughts and Receiving Mental Health Treatment

	Attempters		Non-attempters	
	Males	Females	Males	Females
In the last month:				
No thoughts about suicide	40.0%	36.3%	77.3%	79.9%
Thoughts but would not carry them out	36.6	38.5	13.0	15.7
Would like to kill self	15.2	12.4	3.7	1.8
Would kill self if had the chance	8.2	12.8	6.0	2.6
Ever received treatment at a mental health clinic in hospital for any personal, emotional, or behavioral problem	24.8	19.0	9.1	9.5

SOURCE: University of Minnesota, Adolescent Health Program, Indian Adolescent Health Survey, unpublished preliminary data, 1989.

Table 9—Percentage of Indian Adolescent Males and Females Who Reported Knowing of Others' Suicide Attempts and Suicide Deaths

Suicide-related items	Percent males (n = 1,297)	Percent females (n = 1,360)
Have any family members attempted or died from a suicide attempt	16.0%	23.0%
Have any of your friends attempted suicide	18.4	32.4
Have any of your friends died from a suicide attempt	8.8	10.7

SOURCE: University of Minnesota, Adolescent Health Program, Indian Adolescent Health Survey, unpublished preliminary data, 1989.

previously attempted suicide, who have frequent encounters with the criminal justice system, and who have experienced multiple home placements (37,86,106).

Preliminary analysis from some of the Indian Adolescent Health Survey data suggests that individuals who have attempted suicide are more likely to engage in risk behaviors such as drinking, using marijuana, and sexual intercourse. Furthermore, they are also much more likely to rate themselves in poorer health than their peers, indicate that their school performance is below average, worry about physical and sexual abuse, and report that their parents have a drinking problem (table 10).[9]

Social disintegration and acculturation also have captured a great deal of attention as possible causes of suicide among Indian and Native adolescents (169,180,181,183,367,377,378). Culture conflict and concomitant problems in identity formation are believed to produce a chronic dysphoria and anomie which render Indian youth vulnerable to suicidal behavior during periods of acute stress (137).

Suicide victims more typically belong to tribes with loose social integration—which emphasize a high degree of individuality—and that are undergoing rapid socioeconomic change. However, despite this fairly common pattern, actual rates vary dramatically, ranging from well below the national average in some Southwestern communities to well above the national average in inter-mountain tribes of the Rockies (284,285,323).

Cultural dynamics specific to certain Indian tribes also appear to be at work in determining risk for suicide among Indian adolescents. For example, Levy and Kunitz (183) illustrate that suicide rates are not only high among the Hopi in "progressive villages" and off-reservation bordertowns, but in traditional villages as well. Specifically, Hopis at special risk for suicide include the children of parents who entered into traditionally disapproved marriages, e.g., across tribes, mesas, and even clans of disparate social status. The labeling of parents as "deviant" in this regard stigmatizes their children, thereby engendering a distinct series of stressors.

In another example, Levy (180) suggests that suicide among Navajo males may indicate their relative lack of integration into a changing, matrilineal society. Moreover, he describes how these individuals seem to employ suicide to withdraw from intolerable situations, and yet, by virtue of its social, cultural, and spiritual affront to the survivors, accomplish a final act of aggression. Lastly, tribes which emphasize a high degree of individuality generally exhibit higher rates of suicide than those which emphasize conformity. Classic comparisons include the Apache, Navajo, and Pueblo communities, with the former representing "looser" social

---

[9] Because the IAHS was cross-sectional, it is not possible to know with certainty whether these are risk factors for or consequences of suicide attempts.

Table 10—Covariation of Suicide Attempts With Behavioral and Environmental Risk Factors

	Males (n=1,297)	Females (n=1,360)
Worry about abuse from parents:		
Never attempted suicide	14.0	23.5
Ever attempted suicide	16.8	32.0
Worry about being forced to do something sexual:		
Never attempted suicide	13.3	28.0
Ever attempted suicide	13.2	33.9
Ever had sexual intercourse:		
Never attempted suicide	24.4	16.0
Ever attempted suicide	48.6	36.5
Feeling depressed in last month:		
Never attempted suicide	14.0	15.0
Ever attempted suicide	31.7	30.3
Ever drink beer or wine:		
Never attempted suicide	54.8	48.8
Ever attempted suicide	73.8	71.4
Drink beer or wine at least weekly:		
Never attempted suicide	11.3	6.6
Ever attempted suicide	24.5	19.8
Ever use marijuana:		
Never attempted suicide	35.8	27.4
Ever attempted suicide	57.6	51.9
Use marijuana at least weekly:		
Never attempted suicide	10.2	5.6
Ever attempted suicide	23.8	17.6
Parental drinking problems:		
Never attempted suicide	17.0	21.1
Ever attempted suicide	26.1	32.5
Feel in poor or fair health:		
Never attempted suicide	16.7	19.7
Ever attempted suicide	28.1	31.6
Perform below average in school:		
Never attempted suicide	10.9	9.4
Ever attempted suicide	20.1	13.4

SOURCE: University of Minnesota, Adolescent Health Program, Indian Adolescent Health Survey, unpublished preliminary data, 1989.

integration and that latter two representing "tighter" integration (203,367).

Suicide Clusters

There appears to be an increasing tendency for suicides to occur in clusters, defined as any series of three or more suicides closely related in time and space (61). Several articles have recently appeared in the literature specific to Indian and Native adolescents population (26,71,184) but on the whole little is known about this phenomenon among adolescents in general, much less among Indian adolescents. Conventional wisdom holds that clustering occurs more frequently among females than males, despite higher overall rates among males (250). Reports of cluster suicides among Indian adolescents differ slightly in that the victims are predominantly males, although many attempts by females occur, usually by less lethal means, at similar points in time. Subsequent suicides may be stimulated by personal knowledge of the victim, of the circumstances surrounding the death, and by interpersonal proximity in a relatively closed community. Extensive media coverage may also contribute to the increased probability of serial suicides by dramatizing the death and focusing widespread attention on the victim (118). Bechtold's (26) analysis suggests that serial suicides by Indian adolescents are fueled by the same interpersonal and social dynamics as those which underpin this phenomenon in the population at large.

Anxiety

Like depression, anxiety-related disorders are recognized but not well delineated among the emotional problems associated with childhood and adolescence. The most salient features include excessive fearfulness accompanied by muscular tension, avoidant behavior, somatic complaints without an organic basis, and repeated nightmares. Separation from parents, family, or familiar surroundings, fear of strangers, and various phobia are common forms of anxiety which can impair function.

Information about anxiety among Indian and adolescents derives from the same set of studies summarized above in regard to depression.

Beiser and Attneave (29) reported that anxiety was the fourth most common mental health problem for youth seen through IHS mental health programs in 1974, nearly equal to the frequency of depression (table 11). Eight percent of all boys and girls between the ages of 15 and 19 were identified as suffering from anxiety. May's (202) survey revealed that in 1981 and 1982, about 18 percent of all males and nearly 10 percent of all females seen for anxiety in the IHS Albuquerque Area Office mental health program were between 10 and 19 years of age. Studies of boarding school and college students conducted by the National Center for American Indian and Alaska Native Mental Health Research also included measures of anxiety symptoms. These studies suggest remarkably high levels of different forms of anxiety among Indian adolescents.

Table 11—Studies Generating Estimates of Anxiety Among Indian Adolescents

Study[a]	Setting	Sample	Method	Findings
Studies using mental health service utilization review:				
Beiser and Attneave, 1982	IHS mental health programs (nationwide) (1974)	clients 15 to 19	chart review	8% of clients
May, 1983	IHS mental health programs (Albuquerque area)	clients 10 to 19	chart review	13% of clients (1981) 11.3% of clients (1982)
Studies using self-reports of symptoms:				
NCAIANMHR, Indian Boarding School Project, 1989	Tribally administered boarding school (Southeastern U.S.)	students grades 9-12 (n=188) age range = 12-20 average age = 16	self-report survey	24% physiologic reaction; 44% phobic reaction; 40% performance reaction
NCAIANMHR, Indian Boarding School Project, 1989	BIA administered boarding school (Western U.S.)	students, grades 9-12 (n=225)	self-report survey	27% physiologic reaction; 51% phobic reaction; 43% performance reaction
NCAIANMHR, College Student Life Transitions Project, 1989	State-supplement universities AK, MT, NM, AZ	college students, (n=605), age range = 17-54 average age = 25	self-report survey	23% physiologic reaction; 48% phobic reaction; 56% performance reaction

[a] References are located at end of report.

SOURCE: Office of Technology Assessment, 1990.

Substance Abuse and Dependence

Given the high rate of deaths among young Indians due to causes related to substance use, particularly alcohol (322), there is considerable interest in this problem among Indian tribes and health providers. Several recent surveys point to different conclusions about the extent of substance use among Indian adolescents (table 12). Surveys by Beauvais and Oetting and their colleagues have found high rates of alcohol and drug experimentation among Indian adolescents relative to non-Indian adolescents (25). For example, in 1986-87 an average[10] of 81 percent of Indian students in grades 7 to 12 had used alcohol at some time; 61 percent had used marijuana; 24 percent had used inhalants; 25 percent had used stimulants; 8 percent had used cocaine; 10 percent had used hallucinogens; 11 percent had used sedatives; and 5 percent had used heroin (table 12). Comparable data for non-Indian students are not available, but non- Indian adolescents surveyed by NIDA for their 1985 and 1988 household surveys were much less likely than Indian adolescents to have used each of these drugs (table 12). Preliminary data from the more recent IAHS found much lower use of drugs among Indian adolescents than did the Beauvais and Oetting surveys. Minnesota students were not asked about the same range of drugs that Indian students were asked about, but when they were asked, alcohol and cocaine use were comparable, and marijuana use was higher among Indians than among the mostly non-Indian Minnesota sample.[11]

What is not clear from the data on lifetime prevalence (i.e., "ever" having used a drug) is the number of adolescents who are dependent on or otherwise abuse drugs, as opposed to experimenting with them once. In a survey of attitudes towards drugs on the Wind River reservation in Wyoming, adolescents were found to have a more favorable attitude toward the use of marijuana and other drugs,

---

[10] Obviously, in surveys, fewer younger adolescents than older adolescents are found to have ever used drugs. When the percent ever having used drugs is averaged across all age groups, the overall percent is lower than it would be if only the older adolescents were counted.

[11] The reasons for the apparent difference between the Beauvais and Oetting and the IAHS surveys of Indian adolescents are not clear. Both surveys were conducted among adolescents attending school, so they cannot differ because of possibly unequal drug use by school dropouts. There are subtle, but not striking, differences in questionnaire wording between the two surveys that may account for some of the differences. Also, the IAHS data are preliminary and may not reflect the prevalence of drug use among all Indians.

Table 12—Estimates of Percentage Indian and Non-Indian Adolescents Ever Using Alcohol and Illegal Drugs

	Indian adolescents			Non-Indian adolescents		
	Estimates from surveys by Oetting and Beauvais		Estimates from survey by University of Minnesota	NIDA National Household Surveys		Minnesota Adolescents
	1984-85[a]	1986-87[a]	1988-89[a]	1985[a]	1988[c]	1987-88[d]
Alcohol	79%	81%	57%	57%	50%	61%
Marijuana	57	61	32	24	17	20
Inhalants	24	24	13	9	9	N/A
Stimulants	25	25	11	6	4	N/A
Cocaine	8	8	5	5	3	<5
Crack	N/A	N/A	2	N/A	1	N/A[e]
Hallucinogens	9	10	4	3	4	N/A
Sedatives	10	11	3	4	2	N/A
Heroin	5	5	1	<5	1	N/A

[a] **Reservation based sample**; Indian adolescents attending school, grades 7-12.
[b] **Reservation/service unit samples**; Indian adolescents attending school, grades 6-12.
[c] **Household based survey of youth aged** 12-17.
[d] **School based sample; Minnesota** adolescents in grades 7-12.
[e] **Included** in **cocaine** total.

SOURCES: **1984-85, 1986-87 Indian data:** F. Beauvais, E.R. Oetting, W. Wolf, et al., "American Indian Youth and Drugs, 1976-1987: A Continuing Problem," *American Journal of Public Health* 79(5):634-636, 1989; **1988-89 Indian data:** University of Minnesota, Adolescent Health Program, Indian Adolescent Health Survey, unpublished preliminary data, 1989; **1985 non-Indian data:** U.S. Department of Health and Human Services, Public Health Service, Alcohol, Drug Abuse, and Mental Health Administration, National Institute on Drug Abuse, *National Household Survey on Drug Abuse: Population Estimates 1985*, DHHS Pub. No. (ADM) 87-1539 (Rockville, MD: 1987); **1988 non-Indian data:** U.S. Department of Health and Human Services, Public Health Service, Alcohol, Drug Abuse, and Mental Health Administration, National Institute on Drug Abuse, Division of Epidemiology and Prevention Research, *National Household Survey on Drug Abuse: 1988 Population Estimates*, DHHS Pub. No. (ADM) 89-1636 (Rockville, MD: 1989); **1987-88 Minnesota non-Indian data:** University of Minnesota, Adolescent Health Program, *The State of Adolescent Health in Minnesota*, February 1989.

to be more likely to try using marijuana and other drugs, but no more likely to continue using such drugs after trying them than white adolescents from the same geographical area (58). Nonetheless, observers have noted cause for concern. Persistently high drug use is still the norm across most categories for young Indian people, especially in regard to marijuana, inhalants, and stimulants (25,239). In addition, Oetting and Goldstein's work (242) revealed that American Indians begin abusing various substances at a younger age than their white counterparts (also see 373). Further, once they enter adolescence, Indian youth seem particularly prone to using alcohol and other drugs in combination with one another (239). Inhalant use appears to decline, however, as other substances such as marijuana and alcohol become more accessible.

Finally, the potential for affecting the family and community exists because of financial considerations (185) and possible physical damage due to drug usage. These factors are especially salient because of the low socioeconomic levels of most Indian people and the strong traditional value placed on the family as a unit.[12]

Identity Disorder, Alienation, and Self-Esteem

Identity disorder refers to the severe subjective distress that stems from one's inability to integrate various aspects of the self into a coherent and acceptable sense of personhood (12). It is typically characterized by uncertainty across a number of areas relating to identity, such as long-term goals, friendship patterns, religious membership, moral values, and group loyalties. Though obviously relevant to the life experiences of many Indian adolescents, Indian adolescent identity disorder has yet to appear in the published literature as a formal focus for discussion. However, this same literature is replete with studies that address elements which are central to identity disorder, namely self-esteem and alienation. The missing dimension is the associated degree of functional impairment, and thus this topic marks an area of transition from the mental disorders to serious, but less diagnostically specifiable, problems.

For the most part, studies on self-esteem and alienation suggest that Indian adolescents have negative views of themselves (see table 13). However, a review by Development Associates concluded that while Indian students test at lower than normative levels with respect to their personal self-concept, they hold their own cultural group in high regard (76). They may characterize themselves as being friendly, helpful, easy-going, and more interested in happiness than in success, but not as being particularly smart, strong, good- looking, or at ease in front of groups. The type of school attended—a segregated BIA school or an integrated public school—does not appear to affect self-esteem or sense of alienation according to Development Associates (76).

---

[12] The topic of substance use by Indians will be covered more extensively in a forthcoming paper on the physical health of Indian adolescents. Clearly, however, substance abuse has mental health implications.

Conduct Disorder, School Dropout, Delinquency, and Running Away

By definition, conduct disorder is almost entirely restricted to children and adolescents.[13] The essential feature of conduct disorder is "a persistent pattern in which the basic rights of others and major age-appropriate societal norms or rules are violated" (12). To meet the diagnostic criteria for conduct disorder, an adolescent would have to have a disturbance of conduct lasting at least 6 months, during which at least 3 of 13 specified symptoms would exist. These behavioral symptoms include running away from home overnight at least twice, lying often, truancy from school, the deliberate destruction of others' property, stealing, fighting, and other behaviors (12).

The literature does not allow an analysis of the incidence and prevalence of diagnosable conduct disorder among Indian adolescents. However, studies exist concerning several of the symptoms characteristic of conduct disorder, including dropping out of school, running away, and delinquent behavior. These studies provide some information about the possibility of conduct disorder among Indian adolescents. It is important to keep in mind that these are only single behaviors and do not necessarily mean that the adolescents involved have a diagnosable mental disorder. Running away, dropping out of school, and delinquent behavior may indicate that an adolescent is experiencing emotional stress. In some instances the behaviors involved may be a relatively rational response to environmental problems.

School Dropout

The available literature reveals that Indian students drop out of school at rates substantially higher than the general population. At least 10 studies conducted since 1959 place dropout rates for Indian students between 15 and 60 percent, whereas the frequency of dropout in the general population reported by the same studies ranges from 5 to 30 percent (49,63,72,76,120,309,326,320). Five regional studies confirm these findings, although the differences between Indian and non-Indian students appeared to be negligible in two surveys of New Mexico schools (20,66,140,280,293,358,388).

There are culture-specific factors that help to account for Indian students dropping out of school. Szasz (305), for example, argued that lack of participation and failure within the educational system—coupled with its historic failure to address Indian cultural values and ideals—has led Indian people to perceive schools as irrelevant. In addition, many Indian families still function on the basis of mutual sharing and reciprocity, wherein family needs assume priority over personal desires and larger societal demands. It is no accident, then, that Indian dropouts have frequently cited being needed at home to care for younger siblings and older family members as a reason for leaving school (129). Other family-related factors like mobility and instability also contribute to Indian student dropout. Wax and Wax (372) found a strong relationship between dropping out and irregular employment of fathers among Indian high school students. Brown (47) demonstrated that the families of many Indian school dropouts are characterized by marital conflict, divorce, unstable residence patterns, and parental alcoholism.

Delinquency

Delinquency is thought to be a large and growing problem among Indian adolescents. There is, however, relatively little information to substantiate this assumption.

Forslund and Meyers summarized the studies that appeared in the 1960s and early 1970s (104). These studies indicated that delinquency among Indian youth was characterized by a preponderance of petty offenses and misdemeanors. Forslund and Meyers' own detailed analyses of available records for

---

[13] Other disruptive behavioral disorders include attention-deficit hyperactivity disorder and oppositional defiant disorder (12). Conduct disorder is classified as one of the disruptive behavioral disorders.

Table 13—Studies Generating Estimates of Self-Esteem and Alienation Among Indian Children and Adolescents

Study[a]	Setting	Sample	Method	Findings
Melville, 1968	Public school rural Utah	Navajo students grades 9-12 (n = 99)	Self-concept scale	Navajo ratings lower than white ratings; no relationship between self-concept and achievement
Dankworth, 1970	Urban/rural public school Washoe County, Nevada	Students in grades 7-12 (n = 178)	Self-concept inventory	Self-ratings strongly relate to achievement
Hoffman, 1969	Public school, mission school, BIA school (Montana, South Dakota)	Male students grades 9-12 economically disadvantaged (n = 147)	Brownfain Self-Rating inventory; Herriott Your Future Plans	Ratings increased w/SES; decreased with family instability
Lammers, 1969	Segregated and desegregated public schools, New York, NY	Onondaga students grades 1-6 (n = 120)	Self-Social Symbols Tasks Self-Concept of Ability Scale	Indian ratings equal to white ratings
Corrigan, 1970	BIA and public boarding school Riverside, CA	Students (BIA = 145) (Public=106) grades 1-6	Interviewer-assisted testing; Tennessee Self-Concept Scale	Indian students scored lower than white norms; significant gender differences
Gardner, 1972	BIA school, Gila River Reservation, AZ	Pima students grade 4 (n = 102)	Self-Esteem Inventory; California Short Form Test of Mental Maturity	Pima ratings lower than white and related to reading achievement
Fuchs and Havighurst, 1973	Public school	Students (n = 2,000)	Self-report survey	Indian ratings generally high; self-ratings equal to white ratings
Martig and DeBlassie, 1973	Public school Tularosa, NM	69 Mescalero and 60 white students, grades 1-4	Interviewer-assisted testing; Primary Self-Concept Scale	Indian ratings equal to white ratings; male less than female
Benjamin, 1973	Public schools and boarding schools; Anchorage, Beltz, Bethel and St. Mary's, AK	Eskimo students, grade 9 (n = 90)	Self-report survey; Semantic Differential Scale	Mixed; high ratings on interpersonal aspects; low ratings on intelligence
Withycombe, 1973	Public schools, rural and urban Nevada	Paiute and white students grade 1 and 5 (n = 108)	"This is Me" scale; Bills Index of Adjustment	Paiute ratings lower than white ratings; Paiute ratings decline with age

[a] References are located at end of report.

Arapaho and Shoshone youth on the Wind River Reservation (Wyoming) revealed similar trends. Forslund and Cranston (103) followed up with a self-report survey among adolescents drawn from the same community. While youth from both Indian and non-Indian backgrounds reported having frequently engaged in delinquent acts, there were significant differences between Indian and non-Indian males on only 7 offenses and between Indian and non-Indian females on only 16 offenses. Jensen, Strauss, and Harris (148) demonstrated that factoring out alcohol-related offenses (e.g., arrests for drunkenness)—to which Indian youth, in their data, were three times more prone than Anglo or Hispanic children—rendered delinquency rates comparable across different populations.

May's (202) analyses of BIA law enforcement data from the Albuquerque Area are consistent with earlier findings from the Wind River Reservation. In 1982, the most frequent causes for arrest were disorderly conduct (25.9 percent), liquor law violations (11.2 percent), curfew violations (9.8 percent), drunkenness (9.6 percent), and running away from home (6.6 percent). Fifty-eight percent of juvenile arrests were for alcohol use: 63 percent for males and 37 percent for females.

Running Away

Runaway Indian youth are reportedly a growing problem and have captured recent interest. Data are relatively sparse, however, reflecting the difficulty in identifying and reaching this population.

In an extensive study, the Indian Center, Inc., of Lincoln, Nebraska, and the Department of Sociology at the University of Nebraska (143) collaborated in a survey of 120 runaway Indian adolescents and 91 of their parents. In this survey, the typical runaway was female (53 percent), 15 years of age, in the 8th grade (although 46 percent had been expelled or suspended and another 20 percent had dropped out

Table 13—Studies Generating Estimates of Self-Esteem and Alienation Among Indian Children and Adolescents—Continued

Study[a]	Setting	Sample	Method	Findings
Rosenthal, 1974	Community-wide Lac du Flambeau, WI	Chippewa; age range 3-10 years	Interviewer administered picture identification test	Chippewa ratings lower than white and black ratings
Thornburg, 1974	Public school rural Arizona	Students (n = 265) grade 9	Self-report survey; Tennessee Self-Concept Scale	Indian ratings lower than Black or Mexican-American ratings
Lefley, 1974	Tribal school Miccoskkee and Seminole, FL	Miccosukee and Seminole students; grades 1-6; age range 7-14 years; average age = 10 (n = 72)	Piers-Harris Children's Self-Concept Scale	Indian ratings lower than white ratings; related to acculturation
Ross, 1975	Public school, BIA school; on/off reservation Navajo Nation	Navajo students, grades 7-8	Michigan State Self-Concept of Academic Ability	Ratings more frequently positive than negative; significant difference by type of school
Beuke, 1978	Public school northeastern Arizona	Students grades 5-8 (n =574)	Self-Esteem Inventory	Indian ratings lower than white ratings
Howell, 1979	Public school Denver, CO	Students grades 1-6 (n =132)	Interviewer-assisted self-report; Self-Esteem Inventory	Indian ratings lower than Black and Hispanic ratings
McClary, 1979	Public school Buffalo, NY	Students grades 9-12; average age = 16 (n = 63)	Bills Index of Adjustment	Indian ratings lower than white ratings
Holmgren, 1981	Public school Wyoming	Students Arapaho, Shoshone, grades 9-12 (n= 114)	Alienation Scale	Indian ratings lower than white ratings; related to drinking
Sampson, 1981	Public schools; urban and rural	Students Lumbee, Black, Puerto Rican and white; grades 3-12 (n = 908)	Self-Concept Inventory	No differences by ethnicity; rural Indians higher than urban Indians
Development Associates, 1983	Schools nationwide	Students grades 4-12 (n = 12,000)	10-item self-esteem and academic self-concept scale	Ratings generally high

[a] References are located at end of report.

SOURCE: Office of Technology Assessment, 1990.

of school), living at home (62 percent) with both parents (83 percent); and had at least three siblings. Her father was either unemployed (21 percent) or underemployed (23 percent) and on public assistance (16 percent). Her mother was either unemployed (26 percent) or underemployed (17 percent) and on public assistance (46 percent); was not a native language speaker (90 percent); and did not come from a traditional family background (71 percent).

According to the study authors, these runaway Indian youth in many ways are comparable to runaway youth in general. The majority of the adolescents in the Indian Center study had run away from two to five times (50 percent); 9 percent had runaway more frequently. While almost one-third stayed away from home only 1 day the most recent time out, nearly half stayed away from 2 to 10 days. The remainder were gone even longer. Fifty-six percent of the runaway Indian youth stayed within a 10-mile radius of home, while a relatively small number (15 percent) traveled more than 50 miles away. Most stayed with a relative (36 percent) or friend (53 percent). Only 1 percent stayed in a shelter; another 1 percent stayed in a group home, 3 percent lived in the streets, and 1 percent spent some time in jail. Adolescents in the study almost never sought or received assistance from the police, legal services, child protective services, runaway hot lines, counseling, the clergy or other spiritual leaders, local Indian centers, or drug or alcohol programs. As one might expect, age (16 and older) was strongly and positively related to the frequency, duration, and distance of running away as well as to the likelihood of using public services.

Conflict with parents and home-related problems were the predominant causes of running away but some have run away because of school difficulties and other problems (table 14). Older respondents were more likely to run away because of problems

Table 14—Reasons Given By Indian Adolescents for Running Away (n = 120)

Reasons	Percentage
School performance:	
Poor attendance	17
Kicked out of school	9
Problems with the teacher	7
Bad grades	5
Other school problems	23
Family problems:	
Arguments with parents	38
Can't talk to parents	29
Parents' problems with alcohol or drugs	21
Parents too strict	19
Sibling problems	12
Neglected by parents	8
Abused by parents	8
Parents divorce	6
Parents kicked youth out of home	5
Domestic violence	4
Sexual abuse by parents	1
Want to live with other parent	12
Other home problems	29
Youth in trouble with law	12
Youth in trouble with peers	10
Alcohol or drug problem	15
Pregnancy	6
Friend ran away	15
Feared consequences of misbehaving	12
Other personal problems	13

SOURCE: Indian Center, Inc., Lincoln, NE, and University of Nebraska, Lincoln, Department of Sociology, Bureau of Sociological Research, "The Native American Adolescent Research Project: Report on Interview Surveys of Runaways, Parents, Community Leaders and Human Service Workers," unpublished report, Lincoln, NE, July 1986.

with their siblings. Males were more likely to report legal problems or trouble with alcohol and drugs, while females more often indicated that they ran away because a friend had also run away. Comparisons between youths who had run away only once and those who frequently did so revealed that the latter were more likely to mention parental strictness, arguments with parents, not being able to talk to parents, and parental alcohol and drug abuse.

While away from home, the following problems were most frequently encountered: lack of money (47 percent); lack of clothing (35 percent); lack of transportation (18 percent); trouble finding work (17 percent); getting into trouble with the law (10 percent); and alcohol and drug problems (10 percent). Physical and sexual abuse, loneliness, illness, absence of other Indian people, inability to contact family, and racial discrimination were seldom mentioned, and usually only by older adolescents who had been farther and longer away from home.

In returning home, most of the runaway Indian youths surveyed indicated that the problems which led them to leave were still present. Few (17 percent) reported using services that might help them cope more effectively with these stresses.

The authors concluded that since the vast majority of runaway Indian youth stay with friends and family, resources should be redirected from shelters and other public services to those who actually shelter them.

ENVIRONMENTAL RISK FACTORS FOR MENTAL HEALTH PROBLEMS

A wide range of stressors contribute to mental health problems among Indian adolescents. Many Indian communities experience high rates of unemployment, poverty, alcohol abuse, physical illness, and death (322). These problems have been associated with mental health problems of children and adolescents (323). This section discusses the prevalence and consequences of several environmental risk factors as discussed in the Indian health literature. These include: otitis media, fetal alcohol syndrome, child abuse and neglect, parental alcoholism, family disruption, and school problems. In addition, Indian adolescents have recently been asked about the extent to which they experience stress, both relative to specific life situations and generally; these data are also reported.

Physical Disorders

Otitis Media

Otitis media (middle ear infection) is widely regarded as the most frequently-identified disease of Indian children. Its special significance for adolescent mental health lies in the learning and developmental consequences that may follow from subsequent mild to moderate hearing loss (218,220).

Otitis media is most prevalent from birth to approximately 7 years of age (142,215), which coincides with critical periods in language acquisition. Considerable evidence has been amassed that demonstrates the contribution of otitis media to hearing loss (17,96,247), delays in cognitive and psycholinguistic development (159,157,389), lowered educational achievement (83,107,219,319), and reading problems and emotional difficulties (32,295). The potential scope of these problems is reflected in estimates that as many as 75 percent of all Indian children experience otitis media, that 13,000 Indians are in need of hearing aids, and that as many as 22,000 may require otologic surgery (296).

Fetal Alcohol Syndrome

No review of environmental risk factors is complete without considering Fetal Alcohol Syndrome and Fetal Alcohol Effects and their potential for engendering neurosensory and developmental disabilities. The pioneering work in this area was conducted by May and his colleagues (207,208). In a detailed comparative analysis of selected IHS service units and reservations on which there was adequate case-finding, May and his colleagues found that one group of Indians had a higher incidence of FAS than any that had been reported previously. Two other Indian groups had lower rates, comparable to those reported in samples in Seattle, Sweden, and France, but the incidence appeared to be growing. Of all the fetal alcohol children, 73 percent had been adopted or placed in foster homes because of abandonment or neglect by their natural mothers. Twenty-three percent of biological mothers had died, almost always from an accident, cirrhosis of the liver, or other alcohol-related trauma and illness.

One unanticipated finding noted by May and his colleagues was the relatively small number of mothers responsible for the prevalence of FAS and FAE. This finding suggests that prevention can be targeted to high-risk mothers.

Child and Adolescent Abuse and Neglect

Child and adolescent abuse and neglect is of increasing concern in Indian communities (327). The mental and emotional health of adolescents can be affected by abuse and neglect because they themselves are abused and neglected, or because of lasting emotional scars from abuse and neglect in their earlier years. There is wide variation in estimates of the prevalence of child and adolescent abuse and neglect (see table 15). At present, it is unclear whether this variation is due to widely divergent definitions of the phenomena, to differential reporting methods, or to true epidemiologic differences that reflect the particular stresses and strains of local communities[14] (383).

Not surprisingly, a review of medical records of hospitalized children found the lowest rate of abuse and neglect (5.7 per 1,000 population [99]); few abused and neglected children are hospitalized. Recent data indicate that more than 6,500 referrals for suspected child abuse and neglect were made to BIA in fiscal year 1988 (360). Eighty-one percent (5,338) of the referrals were substantiated within the year. The BIA data underestimate the extent of abuse and neglect of Indian children for several reasons:

- Referrals to BIA do not represent all cases. In some States (e.g., Alaska and California), State social service agencies rather than BIA may play a central role in handling suspected Indian child abuse and neglect cases.
- There is no mechanism for formal and systematic reporting of child abuse and neglect cases to BIA or tribal contract social services programs.
- These data do not include urban Indians.

Nevertheless, these data reflect that a minimum of 1 percent[15] of Indian children in BIA service areas may have been abused or neglected in a single year. Self-reports by Indian adolescents bear out these estimates. In the IAHS survey, 8.3 percent of male and 24 percent of female 7th- to 12th-graders reported that they had been abused physically, sexually, or both at some time in their lives (table 16) (366). Minnesota students were much less likely to report either physical or sexual abuse but were more likely than Indian adolescents to indicate that they had ever discussed the abuse (table 17). The students were not asked whether they had been neglected.

Risk Factors for Abuse and Neglect

Causes of child abuse and neglect in Indian and Native communities span the full spectrum of possibilities. Interpersonal conflict, marital disruption, parental alcoholism, inadequate caregiver-

---

[14] The issue of what constitutes child abuse and neglect in Indian communities has engendered a great deal of debate. Korbin (168) has suggested that it be defined as "the idiosyncratic departure from culturally and socially acceptable standards (of childrearing) that result in harm to a child or compromises his/her physical, emotional, cognitive, social, or cultural development." This view has found considerable currency in recent studies among Indians (98,186). However, regardless of the present differences in definition, there seems to be no question that, in virtually every report, the rates of child abuse and neglect among Indian communities equal or exceed those of their non-Indian counterparts.

[15] Rate based on estimated IHS child service population of 397,065.

Table 15—Studies Generating Estimates of Abuse and Neglect Among Indian Children and Adolescents

Study[a]	Setting	Sample	Method	Findings
Jones, 1969	Native village (Alaska)	Entire Alaskan village (n = 201)	Participant observation; records review	1/3 of all children
Wichlacz, Lane and Kempe, 1978	Cheyenne River Sioux	65 reported cases; average age = 4.5 years old	Register of suspected cases	Rate 26 per 1,000
White and Cornley, 1981	Navajo Nation human service agencies	Clients under 9 years old	Service utilization review	Rate 13.5 per 1,000
Fischler, 1985	IHS hospital (San Carlos)	Service population (N = 6,000)	Medical chart review; staff survey	Rate 5.7 per 1,000
Hauswald, 1987	Navajo Nation	Mothers in 110 normal and problem families in Fort Defiance and Chinle agencies	Ethnography; agency reports	Rate 13.5 per 1,000
Lujan, DeBruyn, May, et al., 1989	Sante Fe IHS Hospitals, NM	53 reported cases; age range 0 to 21 years old, median age 10 years old	Hospital records review	Frequent co-occurrence of abuse and neglect; related to family disruption
Piasecki, Manson, Hiat, et al., 1989	Albuquerque and Phoenix IHS Service Area	1,155 children in mental health treatment, in need of same or abused or neglected; age range 0 to 18 years old; average age = 13 years old	Key informant interviews of Federal human service providers	67% had experienced abuse or neglect; more girls than boys; strong relationship to family stability; associated with more psychiatric symptoms, substance use, delinquency
University of Minnesota, IAHS, 1989	Schools (Plains, Southeast, Southwest)	7th-12th graders (n = 2,700)	IAHS	8.3% of males, 24.0% of females report being abused physically, sexually, or both
Plantz, Hubbell, Barrett, et al., 1989	BIA service areas nationwide, except for "280" States	All referred cases	Report of referred cases	Referrals; 58% of investigated cases substantiated

[a] References are located at end of report.

SOURCE: Office of Technology Assessment, 1990.

child bonding, severe educational deficits, chronic physical illness, unemployment, and violent death are common among the families of abused and neglected Indian children (99,147,237,380,382). In this respect, the dynamics probably mirror those of families in general (60,135). Contributors more specific to Indian communities include stresses resulting from rapid sociocultural change, gender role changes, failed parenting skills, the changing nature of the extended family, and special risks attached to boarding schools (27,119,133).

In the Piasecki et al. (251) survey (see table 15), children with histories of abuse or neglect were more likely to have experienced parental alcoholism, divorce, single parenting, or a chaotic family situation. Children with histories of both abuse and neglect had experienced a higher frequency of each disruptive event except having a single parent.

It is not surprising that, in this study, more Indian children residing with foster or adoptive families had had histories of abuse and/or neglect than their counterparts who lived either with parents or in such institutional settings as boarding schools. In both Indian and non-Indian communities, child abuse and neglect are common reasons for out-of-home placement. The troublesome aspect of these findings lies in the observation that, at the time of the survey, 61 percent of the children with histories of abuse and/or neglect resided within the familial households that likely gave rise to these conditions. Several recent, highly publicized cases of sexual abuse in BIA schools, such as the 1980 and 1987 incidents at

Table 16—Percentage of Indian Adolescents Who Indicated Ever Being Abused by Family Members or Others[a]

Region	Physical only	Sexual only	Both physical and sexual
Total IAHS subsample:			
Males (n = 1,297)	6.0%	1.1%	1.2%
Females (n = 1,360)	9.9	6.3	7.8
Plains subsample:			
Males (n = 529)	5.7	0.6	0.6
Females (n = 585)	11.5	5.5	8.2
Southwest subsample:			
Males (n = 564)	6.2	1.6	1.5
Females (n = 575)	9.4	6.8	6.6
Southeastern subsample:			
Males (n = 204)	6.0	0.7	2.2
Females (n = 200)	6.3	7.4	9.7

[a] Items were:
Have you ever been physically abused or mistreated by anyone in your family or by anyone else?
Have you ever been sexually abused? Sexual abuse is when someone in your family or someone else touches you in a place you did not want to be touched or does something sexually which they shouldn't have done.

SOURCE: University of Minnesota, Adolescent Health Program, Indian Adolescent Health Survey, unpublished preliminary data, 1989.

Table 17—Percentage of Indian and Minnesota Adolescents Who Indicated Ever Being Physically or Sexually Abused

Region	Physical	Sexual	Both
IAHS subsample:			
Males (n = 1,297)	6.0%	1.1%	1.2%
Ever discuss	44.2	34.7	N/A
Females (n = 1,360)	9.9	6.3	7.8
Ever discuss	60.4	15.6	N/A
Minnesota AHS:			
Metro males (n = 12,155)	5.1	2.1	N/A
Ever discuss	58.0	49.5	N/A
Rural males (n = 6,300)	4.2	1.7	N/A
Ever discuss	50.2	40.0	N/A
Metro females (n = 11,538)	14.5	15.5	N/A
Ever discuss	71.2	62.6	N/A
Rural females (n = 282)	11.5	13.2	N/A
Ever discuss	65.7	57.8	N/A

SOURCES: **IAHS subsample:** University of Minnesota, Adolescent Health Program, Indian Adolescent Health Survey, unpublished preliminary data, 1989; **Minnesota AHS:** University of Minnesota, Adolescent Health Program, Minnesota Adolescent Health Survey, unpublished data, 1987.

Navajo and Hopi, respectively, indicate, however, that home is not the only arena in which Indian children are at risk for abuse (327).

Consequences of Abuse and Neglect

Children who have been abused and/or neglected exhibit behavioral, social, developmental, and cognitive deficits when compared to children who have not experienced abuse or neglect (48,94,121,174,198,312). Results from studies using clinical samples are mixed, however, with respect to whether and how abused and neglected children suffer from different or more severe mental disorders than other non-abused, but emotionally disturbed children (56,160,230;268). Monan, Leichter, and Lewis (230) indicated that abused and/or neglected children did not differ diagnostically from other emotionally disturbed children, except that the abused and neglected children were more violent. The study by Carmen, Rieker, and Mills (56) found no differences between the diagnoses assigned psychiatric inpatients with and without abuse histories. However, female patients who had been abused were more self-destructive than nonabused females and abused males were more aggressive than non-abused males. Kazdin and his colleagues (160) found that physically abused subjects (ages 6 to 13) showed greater depression and hopelessness than the non-abused controls, but only on self-report measures, not diagnostically. Rogeness, Amrung, Macedo, et al. (268) reported increased conduct disorder in abused or neglected boys and in abused girls, and more borderline, conduct, and concentration symptoms in abused or neglected children than in non-abused, non-neglected children.

Data from the Piasecki et al. study are consistent with previous findings that children who have experienced abuse only or neglect only do not differ psychiatrically from those who have experienced neither abuse nor neglect. But, those children who suffered both abuse and neglect did evidence greater frequencies of symptoms of mental health problems than any of the other children. In addition, they were more likely to have been expelled from school or run away from home.

Students responding to the IAHS who had been abused were more likely to be more worried about abuse, to feel depressed, to feel in poor or fair health, to perform below average in school (males only), and to have engaged in the risk behaviors of sexual intercourse,[16] alcohol and marijuana use, and attempted suicide (table 18).

---

[16] This may be a misinterpretation, because the sexual abuse may have involved forced sexual intercourse. Thus, the sexual intercourse could not properly be considered a risk behavior of the adolescent. However early voluntary sexual intercourse may be a consequence of childhood sexual abuse (264,271). Evidence also shows that sexually abused children may later experience feelings of increased vulnerability, stress, and sexual dysfunction (264,332).

Table 18—Covariation of Abuse With Behavioral Risk Factors and Stress

	Percent who experienced or did not experience abuse	
	Males	Females
Worry about abuse from parents:		
Both physical & sexual abuse	20.0%	36.1%
Physical abuse only	18.1	35.5
Sexual abuse only	34.5	31.3
No abuse	13.3	23.6
Worry about being forced to do something sexual:		
Both physical & sexual abuse	22.0	41.2
Physical abuse only	16.9	30.0
Sexual abuse only	21.8	35.8
No abuse	12.7	27.8
Ever had sexual intercourse:		
Both physical & sexual abuse	40.0	49.8
Physical abuse only	39.1	34.5
Sexual abuse only	33.9	36.0
No abuse	25.9	14.4
Feeling depressed in last month:		
Both physical & sexual abuse	32.7	32.6
Physical abuse only	21.9	27.3
Sexual abuse only	22.4	17.2
No abuse	14.5	15.4
Ever drink beer/wine:		
Both physical & sexual abuse	72.2	72.0
Physical abuse only	65.4	66.4
Sexual abuse only	57.1	66.8
No abuse	55.8	48.8
At least weekly use of beer/wine:		
Both physical & sexual abuse	18.5	12.6
Physical abuse only	19.1	13.1
Sexual abuse only	12.5	12.6
No abuse	12.4	7.8
Ever smoke marijuana:		
Both physical & sexual abuse	57.4	47.6
Physical abuse only	46.1	45.1
Sexual abuse only	35.1	37.8
No abuse	37.3	29.0
At least weekly use of marijuana:		
Both physical & sexual abuse	18.6	10.3
Physical abuse only	18.5	11.7
Sexual abuse only	14.1	10.1
No abuse	10.4	6.9
Feel in poor or fair health:		
Both physical & sexual abuse	33.6	37.8
Physical abuse only	21.8	26.4
Sexual abuse only	19.0	27.2
No abuse	17.5	19.9
Ever attempted suicide:		
Both physical & sexual abuse	41.7	43.0
Physical abuse only	22.2	35.2
Sexual abuse only	30.6	22.7
No abuse	9.5	13.8
Perform below average in school:		
Both physical & sexual abuse	18.5	11.0
Physical abuse only	15.6	13.6
Sexual abuse only	22.4	12.8
No abuse	11.2	10.0

SOURCE: University of Minnesota, Adolescent Health Program, Indian Adolescent Health Survey, unpublished preliminary data, 1989.

Thus, the abuse and neglect of children and adolescents deserves preventive intervention, if possible, and intervention with the victim if prevention efforts are not successful.

Parental Alcoholism

The extent of alcohol abuse in Indian communities is of longstanding concern (322). Alcohol use is implicated in many of the major causes of morbidity and mortality for Indians. Recently, a total of 22.5 percent of Indian adolescents surveyed perceived that their parents had a drinking problem (366). This compares to 14 percent of Minnesota adolescents who were asked a similar question (364).

Family Disruption

Family disruption may, of course, be related to parental (or adolescent) alcoholism, poverty, unemployment, physical illnesses, or all of the above. It can result in mental health problems for adolescents (323). Two recent surveys found substantial evidence of family disruption among Indian adolescents.

Compared to Minnesota students, Indian students reported that their biological parents were less likely be living together (64 v. 49 percent), and, not surprisingly, more likely to be divorced or separated (22 v. 34 percent) (table 19). Perhaps most disturbing, 12 percent of Indian adolescents reported that one or both parents were dead, compared to approximately 3 percent of Minnesota students reporting

Table 19—Status of Biological Parents and Living Arrangements of Indian and Minnesota Adolescents

	Biological parental status	
	Percent total IAHS (n = 2,672)	Minnesota (n = 36,284)
Living together	49.3%	64.0%
Divorced or separated	12.2	22.0
One/both parents dead	4.7	3.0
Don't know	4.7	2.0
	Students' living arrangements	
	IAHS	Minnesota
Single parent household	39.7%	16.8%
Two parents/blended	39.8	80.3
Other	20.5	2.9

SOURCE: **Indian student data:** University of Minnesota, Adolescent Health Program, Indian Adolescent Student Health Survey, unpublished preliminary data, 1989; **Minnesota biological parent status data:** Minnesota Department of Education, Minnesota Survey Report, unpublished data, 1989; **Minnesota student living arrangement data:** University of Minnesota, Adolescent Health Program, Minnesota Adolescent Health Survey, unpublished data, 1987.

such a tragedy. As a consequence, Indian adolescents were more than twice as likely to report living in a single-parent household, and almost 10 times as likely to report living without a parent as the Minnesota students.

Although they did not compare Indian students' sources of stress with those of non-Indian students, recent surveys by the NCAIANMHR found that 75 percent of Indian students in either universities, tribal boarding schools, or BIA boarding schools had experienced stress as a result of personal problems of family members, the death of a relative, the health of a close family member, or bad news from home.

School Environment

The world of school constitutes one of the most important environments in an adolescent's life. Perhaps second only to family, it is in the school environment where children learn the socialization skills necessary for life. While the manifest purpose of schools is to educate, they also are the main social arena for youth of all ages. It is in this arena where peer pressure to conform builds. The following section profiles how American Indian adolescents see their school environments.

Students completing the IAHS and Minnesota Adolescent Health Survey were asked a series of questions about how much certain behaviors go on in and around their school (table 20). Alcohol consumption is seen as the most frequently occurring behavior for both Indian and Minnesota students, although rural Minnesota youth saw drinking behavior going on more than either metropolitan Minnesota or Indian students. On the other hand, Indian students were much more likely to indicate that students were using drugs, destroying property, getting into fights, and stealing.[17]

Contrasting Indian students by geographic/tribal affiliation shows that Plains adolescents are more likely to see drinking, fighting, and drugs as more common in their environment (see table 21). Perceptions of somewhat lower alcohol usage by Southeast Indian adolescents is probably reflective of restrictive liquor laws in the area around the reservation. Southeast students differed in drug use, they were much more likely to perceive that students were sniffing substances (glue, paint, liquid paper, etc.) than students elsewhere but less likely to perceive the use of other drugs. Fights are more likely to be perceived by Plains students; this may be reflective of the level of alcohol usage.

The series of studies in three different types of institutions by NCAIANMHR that asked about sources of family-related stress also asked students about school-related stress. As shown in table 22, school pressures were a substantial source of stress for students. School-related problems were more common among the college sample, perhaps because of the greater commitment required and close ties between academic performance and financial issues. Indian adolescents in high school were more likely to identify concerns about families and friends. Comparisons to data reported for their Anglo, middle-class counterparts (84) indicate that many more Indians report having had these kinds of stressful experiences and found them of equal or greater concern.

Other Life Stressors

In addition to the stressors of specific life situations such as physical handicaps, family disruptions, and school, stress can be measured by asking questions about general well-being. While not always more commonly than their non-Indian counterparts, a substantial minority of Indian respondents reported to the IAHS experiencing extreme stresses and strains, dissatisfaction with their personal lives, and feeling tired and worn out (table 23). Indian students were twice as likely as Minnesota students to feel that life was uninteresting and to feel emotionally insecure, with almost one-half of Indian adolescents reporting these feelings.

CONCLUSIONS AND POLICY IMPLICATIONS

As may be apparent from the foregoing discussion, making sense of the current mental health status of American Indian and Alaska Native youth is not unlike trying to sew a large, predesigned quilt from pieces of cloth that vary in size, shape, texture, and color. Clearly, many Indian children and adolescents live under stress. Many experience mental health problems, at rates that usually exceed their mainstream counterparts. Yet anecdotal evidence

---

[17] Some of the differences between perceptions may be due to a slightly younger sample of Indian youths, with nearly 56 percent being 14 and under compared to approximately 42 percent for Minnesota youth. Preliminary analyses of Minnesota data suggest that stealing, fighting, and vandalizing behaviors were more likely to occur with students in junior high.

Table 20—Perceptions of School Environments by Indian and Minnesota Students

	Percent responding quite a bit or very much					
	Indian students		Minnesota metro students		Minnesota rural students	
Perceived other students:	Males	Females	Males	Females	Males	Females
Drinking	41.8%	50.2%	45.3%	48.5%	55.7%	62.6%
Using drugs	29.1	34.1	21.7	26.3	12.0	14.5
Sniffing glue, paint, liquid paper, etc.	17.0	19.8	—	—	—	—
Destroying property	23.0	27.8	18.0	18.8	15.2	14.1
Getting into fights	37.7	45.3	24.3	25.5	20.5	20.7
Stealing things	29.3	28.9	22.9	21.9	18.7	18.3

SOURCES: **Indian student data:** University of Minnesota, Adolescent Health Program, Indian Adolescent Health Survey, unpublished preliminary data, 1989; **Minnesota metro and rural student data:** University of Minnesota, Adolescent Health Program, Minnesota Adolescent Health Survey, unpublished data, 1987.

Table 21—Perceptions of School Environments by Southwest, Plains, and Southeast Indian Students

	Percent responding quite a bit or very much			
Perceived other students:	Total	Southwest	Plains	Southeast
Drinking	46.1%	39.4%	58.6%	30.1%
Using drugs	31.6	34.2	37.9	6.7
Sniffing glue, paint, liquid paper, etc.	18.4	10.8	12.2	56.5
Destroying property	25.4	26.2	27.2	18.1
Getting into fights	41.6	31.1	54.7	32.0
Stealing things	29.6	28.8	31.2	30.2

SOURCE: University of Minnesota, Adolescent Health Program, Indian Adolescent Health Survey, unpublished preliminary data, 1989.

Table 22—School Pressures Experienced as Stressful by Indian Students

	Universities	Tribal boarding school	BIA boarding school
Receiving a D or F on a test	X[a]	X	X
Personal Pressure to get good grades	X	X	X
Pressure to get an A or B in a course	X	X	X
Fear of failure	X	X	X
Failing to complete assignments	X	X	X
Studying for a test	X	X	X
Taking a test a class	X	X	X
Difficulty getting motivated for classwork	X	X	X
Completing a term paper	X		X
Conflict between my goals and those others have for me	X	—	X
Giving a class presentation	X	—	—
Fear of failure to meet family expectations	X	—	—
Deciding what to do after graduation	—	X	X
Not enough recreational activities	—	X	X
Students gossiping and spreading rumors	—	—	X
Being so far from family	—	—	X
Being written up for incidents	—	—	X
Serving restriction	—	—	X

[a] "X" indicates that 75 percent of the students surveyed responded that they had both experienced the event and found it to be stressful to some degree.

SOURCES: National Center for American Indian and Alaska Native Mental Health Research, College Student Life Transitions Project, unpublished preliminary data, 1989; National Center for American Indian and Alaska Native Mental Health Research, Indian Boarding School Project, unpublished preliminary data, 1989.

Table 23—General Well-Being and Stress Among Indian and Minnesota Adolescents

	IAHS[a]		Metro Minnesota		Greater Minnesota	
	Males (n = 1,297)	Females (n = 1,360)	Males (n = 12,155)	Females (n = 11,538)	Males (n = 6,308)	Females (n = 6,282)
Percent responding quite a bit or very much to:						
In the last month have you felt:						
Extreme stresses and strains	18.3%	23.9%	27.3%	28.3%	22.5%	23.2%
Dissatisfied with personal life	18.3	23.8	22.4	25.2	21.9	22.7
Life was uninteresting	45.4	40.8	19.8	21.4	23.4	22.7
Not feeling emotionally secure	43.0	42.9	19.3[b]	—	19.7[b]	—
Tired, worn out	23.3	30.9	24.5	26.4	22.2	23.5

[a] Indian Adolescent Health Survey

[b] Males and females combined

SOURCE: **Indian student data:** University of Minnesota, Adolescent Health Program, Indian Adolescent Health Survey, unpublished preliminary data, 1989; **Minnesota student data:** University of Minnesota, Adolescent Health Program, Minnesota Adolescent Health Survey, unpublished data, 1987.

indicates that many Indian youth thrive psychologically despite these circumstances. Unfortunately, the present knowledge base and means of adding to it lag far behind the desire to appropriately target, deliver, and extend needed treatment and preventive interventions. Almost every report on the mental health status of Indian children and adolescents has reached the same conclusion: systematic procedures for gathering basic epidemiologic and patient-centered service utilization data are nonexistent and the lack thereof cripples thoughtful and effective planning (123,28,29,205,235). This section discusses what could be done to improve the availability of information about Indian adolescents' mental health. Chapter 3, which follows, charts the services available to treat and prevent Indian adolescents' mental health problems.

Several courses of action may be taken to remedy the lack of information. These include: 1) establishing patient-centered, diagnosis-sensitive data systems that link different service agencies; 2) developing surveillance units within existing service agencies; and 3) conducting a national community-based epidemiologic study of child and adolescent mental health problems.

Patient-Centered Data Systems

The IHS relies on service utilization data to estimate the mental health needs of Indian communities. A number of computerized reporting systems are currently in use by tribes and the IHS but they are not used consistently across tribes or IHS service units. The two most common are the Ambulatory Patient Care (APC) system and the Patient Care Information System (PCIS). The APC system uses a list of 11 categories of mental disorders and three categories of neurological disorders on a checklist form. These classifications encompass the general categories of neuroses, schizophrenia and other psychoses, organic brain syndromes, personality disorders, etc. In addition to not conforming to modern diagnostic terminology, they do not allow for more specific coding of mental health problems, especially those relevant to children and adolescents.

Three of the 12 IHS Area and Program Offices—Alaska, Tucson, and Billings—utilize PCIS. This system employs diagnostic coding from the International Classification of Diseases, 9th rev. (ICD-9) (338). However, the strengths of the PCIS are tempered by inadequate field staff training and continued reliance on program contacts rather than individual patients. Recognizing these limitations, the IHS has formed a task force to revise its patient information systems. Though planning in regard to medical diagnostic codes has proceeded fairly swiftly, numerous questions remain with respect to mental health problems. Considerable debate has arisen over nomenclature and coding procedures. Current estimates by IHS administrators are that an operational system for systematically coding and recording mental health problems in general will be in place in 1994.

An additional problem has arisen with the advent of yet a different IHS patient information system. The Alcohol Treatment and Guidance System (ATGS) was introduced in 1980 and fully adopted 3 years later as a means of monitoring IHS and tribal alcohol treatment and prevention programs. It is designed to provide information about treatment activities, training needs, client progress, and program effectiveness. The ATGS consequently offers a rich and potentially useful database which, to date, remains virtually unexamined. It is hoped that ATGS will soon be used to generate estimates of "treated" prevalence, of the proportions and types of services delivered to youth, and of their efficacy. These data, however, are not linked with either medical or mental health records, thereby frustrating attempts to discover possible relationships among these different illnesses and systems of treatment. This latter point is particularly important in light of May's (205) demonstration that significant quantities of IHS medical and mental health services are consumed by individuals suffering from alcoholism.

Social service, special education, law enforcement, and child welfare data, which may be compiled by the BIA, local tribes, and urban Indian health care programs, are rarely computerized. For example, the BIA has only recently initiated computerization of data pertaining to the use of its social services. Psychoeducational evaluations, often conducted routinely by psychologists and social workers in BIA schools, are seldom accessible in any systematic fashion. Urban Indian health care programs do not employ a common means of recording and reporting mental health problems.

One of the first challenges is to upgrade the IHS patient information systems with respect to diagnostic sophistication, relevance to the mental health problems of children and adolescents, case-orientation, and linkage across different systems of care. The information systems for other agencies are far less advanced and will require much greater effort to move in the same direction.

Surveillance Units

The development ot these information capabilities ought to be accompanied by the establishment of surveillance units within each agency. Such units should be charged with the analysis of the resulting data to inform program planning. Products could include "treated" prevalence and incidence rates of select mental health problems among Indian adolescents, patterns of risk among adolescents in treatment, descriptions of the types and quantities of services used, identification of "high" users of services, and evaluations of treatment effectiveness. None of this information is currently available.

Epidemiologic Data

The mental health problems of Indian adolescents can only be partially understood from service utilization data. Numerous biases affect who seeks, obtains, or is identified as needing treatment. Such factors include cultural acceptability, accessibility, staff skills and training, as well as program history. Consequently, the insights generated by program information systems must be supplemented by community-based epidemiologic studies. This requirement is widely acknowledged among health professionals and service planners. A number of recent examples include the National Institute of Mental Health Epidemiologic Catchment Area studies (261) and the National Center for Health Statistics' biannual household survey (146). Yet no comparable epidemiologic studies have been undertaken with Indian adolescents nor have Indians ever been included to a meaningful degree in any national survey. Indeed, it is not surprising, then, that a recent draft report by the IHS Office of Mental Health Programs--based on a survey of providers, planners, and investigators--listed a large-scale psychiatric epidemiologic study of children and adolescents as among the highest priorities for future Indian mental health research (355). Another series of recommendations in regard to IHS alcohol research initiatives recently reached the same conclusion (352).

Current information and research technologies are capable of meeting the challenges of obtaining better information about the mental health of Indian adolescents. The real barriers to future advances are the lack of available resources and organizational as well as philosophical schisms that preclude meaningful collaboration across the agencies charged with delivering needed mental health care to American Indian and Alaska Native adolescents.

Chapter 3

Delivery of Mental Health Services to American Indian and Alaska Native Adolescents

There is no single system for delivering mental health treatment to Indian and Native youth. Rather, there are a series of agencies and institutions with different responsibilities that create a patchwork of resources that varies from community to community. This chapter describes, to the extent information is available, the agencies relevant to the mental health of adolescents. It also describes the way in which contemporary mental health treatment approaches and settings have been adapted by Indian communities. The chapter makes clear that mental health services for Indian adolescents appear to be inadequate, given the mental health needs described in chapter 2.

AGENCIES INVOLVED IN THE DELIVERY OF MENTAL HEALTH AND RELATED SERVICES TO INDIAN ADOLESCENTS

The agency most directly responsible for providing mental health services to Indian adolescents is the Indian Health Service's Mental Health Programs Branch. IHS's Alcoholism/substance abuse Programs Branch, the Bureau of Indian Affairs, tribal health programs, urban Indian health programs, and State and local service agencies also play a role in providing mental health services.

Indian Health Service[1]

Mental Health Programs Branch

The mission of the Indian Health Service Mental Health Programs Branch (MHPB) is to provide access for all Indian persons to high-quality and culturally appropriate mental health services that are appropriate to the nature and severity of their mental illness (355). The MHPB, which is one component of the Division of Clinical and Preventive Services in the IHS Office of Health Programs, has two geographic locations. Mental health and social services staff are located in IHS headquarters offices in Rockville, Maryland. Staff responsible for field services—e.g., quality assurance, planning, data, research, community consultation, special projects, children's services, and training—are located in the IHS Headquarters West Mental Health Office in Albuquerque, New Mexico. Branch staff work closely with area and service unit personnel, and with major Indian organizations.

As of April 1989, IHS reported that 251 staff were supported by mental health categorical funds (355) (table 24). Of these, 198 provide direct care, while 53 are administrative or clerical staff or professionals who work at one of the headquarters offices. The estimated total of 200 clinical staff means that on the average, between one and two mental health direct treatment personnel are available in each of IHS's 127 service units. In actual practice, 80 percent of the service areas have a mental health presence and 20 percent do not[2] (355) (see table 24).

The distribution of mental health resources and staff varies considerably from area to area as does the availability of mental health professionals trained to work with children or adolescents (tables 24 and 25). As shown in table 25, in fiscal year 1988 the per capita budget for mental health services for persons of all ages in IHS areas ranged from $6.00 per person in California to $23.30 per person in the Billings and Portland areas.[3] Only 17 (9 percent) of the 198 direct care professionals were trained to work with children or adolescents, while children aged 19 and younger account for approximately 43 percent of the Indian population (355). This amounts to an average of 0.43 providers per 10,000 children and adolescents. In 4 of the 12 IHS areas, there are no child- and adolescent-trained mental health professionals.[4]

Given the mental health problems of adolescents described in chapter 2, the resources to provide mental health services are clearly inadequate. IHS's

---

[1] See appendix C of this Special Report and U.S. Congress, OTA, April 1986, for an overview of the IHS.

[2] Table 20 shows the distribution of personnel by IHS area office rather than by the smaller organizational service unit.

[3] With its increased appropriation for fiscal year 1990 (see ch. 1), IHS plans to increase mental health allocations to at least $12 per capita (for all ages combined) in each area.

[4] Estimated mental health providers per 10,000 adolescents by area is shown in table 1 in chapter 1 of this Special Report.

Table 24—Indian Health Service Mental Health Programs Branch Staff, April 1989[a]

Area	All staff Combined IHS Direct and 638 programs[a] Psychiatrists	Psychologists	Nurses	Social workers	Social work associates	Mental health technicians	Other mental health professionals	Administration and clerical	Total
Aberdeen	2	3	2	8	—	14	4	5	38
Alaska	4	2	1	1	—	—	—	3	11
Albuquerque	1	10	—	—	—	11	—	3	25
Bemidji	—	2	—	3	—	3	—	—	8
Billings	—	2	3	12	1	2	4	6	30
California	—	1	—	—	—	—	—	—	1
Nashville	—	1	—	—	—	—	—	—	1
Navajo	10	2	—	4	—	9	8	9	42
Oklahoma City	1	2	1	15	—	—	9	4	32
Phoenix	2	10	1	1	—	3	2	8	26
Portland	1	2	—	8	2	3	5	—	21
Tucson	1	—	—	—	—	—	—	—	1
Total **Area** Direct or 638 Mental Health programs	22	37	7	52	3	45	32	38	236
Headquarters staff	1	2	—	3	—	—	3	6	15
Total **IHS** Direct or 638 Mental Healthprograms	23	39	7	55	3	45	35	44	251

[a]Direct and 638 Mental Health Programs: Positions counted against Mental Health Program's position ceiling and funded with Mental Health Program dollars.

Table 24b—Child- and Adolescent-Trained Mental Health Professionals[a]

Area	Combined IHS Direct and 638 programs[a] Psychiatrists	Psychologists	Nurses	Social workers	Social work associates	Mental health technicians	Other mental health professionals	Total
Aberdeen	1	—	—	—	—	—	1	2
Alaska	1	—	—	—	—	—	—	1
Albuquerque	—	1	—	—	—	—	—	1
Bemidji	—	—	—	—	—	—	—	—
Billings	—	2	2	4	—	—	1	9
California	—	—	—	—	—	—	—	—
Nashville	—	—	—	—	—	—	—	—
Navajo	2	—	—	—	—	—	—	2
Oklahoma City	1	—	—	—	—	—	—	1
Phoenix	—	—	—	—	—	—	—	—
Portland	—	—	—	1	—	—	—	1
Tucson	—	—	—	—	—	—	—	—
Total	5	3	2	5	—	—	2	17

[a]Program indicates number of professionals specified who are trained to work with the mental health problems of children or adolescents.

SOURCE: U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, Mental Health Programs Branch, "A National Plan for Native American Mental Health Services," 10th draft, unpublished report, Rockville, MD, June 26, 1989.

own draft National Plan for Native American Mental Health Services concluded:

> While Native Americans suffer from the same types of mental disorders as other Americans, the prevalence and severity of these disorders appear to be greater, the availability of services lower, the cultural relevance of treatment plans more challenging, and the social context more disintegrated than in almost any part of American society. Failure to address these issues will result in more severe emotional problems for future generations of Native American individuals, families, and communities.

What constitutes an adequate number of mental health professionals for children and adolescents? The question is difficult to answer. IHS's draft Plan's major recommendations included more than doubling the current number of direct treatment staff and assuring that trained staff are available to "provide services to Native American populations with special needs, especially children" (355).

Table 25—IHS Mental Health Programs Branch User Population, Budget Per Capita, and Mental Health Providers Per 10,000 Population by IHS Service Area, FY 1988

IHS service area	User population	Budget per capita 1988[a]	Mental health direct care providers per 10,000 population[b]
Aberdeen	78,677	$18.14	4.2
Alaska	88,511	9.86	.9
Albuquerque	62,284	16.83	3.5
Bemidji	44,837	9.83	1.8
Billings	49,800	20.30	4.8
California	39,866	6.00	.2
Nashville	25,022	14.84	.4
Navajo	167,741	10.29	2.5
Oklahoma	217,211	6.15	1.5
Phoenix	75,522	15.34	3.4
Portland	54,059	20.30	3.9
Tucson	19,877	12.56	.5
Totals-all ages	923,407	11.89	2.1
Totals-ages 0-19[c]	397,065	N/A	0.4

[a] Calculated on basis of $10,983,340.

[b] See table 24 for numbers of providers. Ratio of mental health providers to population by area is for all ages.

[c] Figures are not available for ages 10-19.

SOURCE: U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, Mental Health Programs Branch, "A National Plan for Native American Mental Health Services," 10th draft, unpublished report, Rockville, MD, 1989.

OTA has attempted to estimate the number of child-and adolescent-trained mental health professionals that would optimally be available to serve Indian children and adolescents. Such an estimate is made difficult by the fact that both the total number of such specially trained mental health professionals in the United States and standards for provider-to-population ratios are generally not available.[5] In 1981, the Graduate Medical Education National Advisory Committee (GMENAC) recommended to the Secretary of the U.S. Department of Health and Human Services that 8,000 to 10,000 child psychiatrists be available by 1990 (339). A GMENAC panel estimated, however, that psychiatrists would be needed to treat approximately 25 percent of the mental health needs of children and adolescents, with the other needs being treated by primary care physicians, pediatricians, and other mental health professionals.[6,7] Since then, the advisability of primary care physicians' treating mental disorders has been questioned (260). Thus, OTA concludes that GMENAC's recommended total number of child and adolescent mental health professionals can be increased to between 32,000 and 40,000 in 1990. This estimate remains somewhat conservative in that an oversight panel of GMENAC reduced an original recommended projection of child psychiatrists from 25,000 to between 8,000 and 10,000 in part because of "a lack of capacity to train adequate numbers of professionals to treat the large unmet need by 1990" (339).

With an estimated total U.S. child and adolescent population aged 0- to 19-years-old of 89.6 million in 1990 (328), OTA concludes that a provider-to-population ratio of 4 to 5 child- and adolescent-trained mental health professionals to every 10,000 children and adolescents is needed. Within IHS service areas alone, this would translate to an increase in child- and adolescent-trained mental health professionals from 17 to between 160 and 200, or at least 1 to 2 for every 1 of the 127 service units.[8] OTA's conclusion concurs somewhat with the IHS's recommendation, except that it substantially more than doubles the current number of direct mental health treatment staff for children and adolescents.

---

[5] One available estimate is from the American Academy of Child and Adolescent Psychiatry, which approximates that 5,000 child- and adolescent-trained psychiatrists alone are currently available in the United States (67). In 1981, the USDHHS NIMH had proposed a survey to determine the number of available mental health treatment professionals in 1981, but the request was refused by the U.S. Office of Management and Budget as having no practical utility for the Federal Government (187).

[6] The panel estimated psychiatrists should see nearly all children with psychoses and those in hospital settings, but only 25 percent of children with neuroses, personality disorders and other nonpsychotic mental illnesses (339). Because very few children and adolescents suffer from psychoses, and because children and adolescents in hospital settings are also treated by mental health professionals other than psychiatrists (323), OTA used an overall estimate of 25 percent of children and adolescents with mental health problems being seen by psychiatrists. The issue of the appropriate professionals to treat adolescents will be addressed in OTA's adolescent health assessment.

[7] The GMENAC panel also attempted to correct for the percentage of child mental health care provided by "general" psychiatrists and for the percentage of adult mental health care that child psychiatrists would provide (339).

As for a standard percent of expenditures for child and adolescent mental health problems (see table 25), few data are available. Few States are able to disaggregate expenditures for children from those for other age groups; those that were able to do so estimated spending $9 per capita for services specifically for children in 1985 (231). For all ages combined, average per capita expenditures by States averaged $25.30 in 1985 (231). It is important to note that most State spending is for inpatient mental health care,[9] but that private and third-party expenditures for outpatient and inpatient care are not included in State per capita expenditures.[10]

Primary Health Care Services

Most of IHS's budget is devoted to the provision of primary acute health care services (see app. C). Because of the paucity of mental health professionals, primary care practitioners may be the principal source of detection and treatment of mental health problems for Indian adolescents. The extent of such screening and treatment is not known, however. In every IHS service area, medical providers are scarce (323, 324, 87). The ratio of providers to population is well below accepted standards (324,87). This overextension is due to a combination of widespread needs among Indians for physical health care, the fact that IHSs' financial resources have not increased relative to inflation since 1978, and difficulties in recruiting clinical personnel to IHS service areas.

Even if there were a sufficient number of primary care physicians to treat adolescents with mental health problems, the delivery of mental health services by non-psychiatric physicians is a problem of sufficient magnitude that the 1990 objectives for the health care of the Nation focused on improving this facet of the health care delivery system (333). The National Institute of Mental Health is devoting substantial resources to this problem on a national level (see 260). Yet, little coordinated effort has been brought to bear to meet this objective within the IHS. One exception has been the recent training, funded through the 1986 Drug Omnibus Act, of IHS physicians and other allied health personnel in the awareness, recognition, and treatment of substance disorders (350). However, no systematic evaluation has been undertaken to determine if such training has improved actual practice nor have provisions been made to continue in-service education to reinforce the lessons learned. In addition, these efforts are focused on substance abuse disorders, not other mental health problems. This may be particularly serious with respect to the treatment of adolescents because most physicians report that they do not understand adolescents' problems (43). While this problem is not specific to IHS physicians, IHS physicians come from the same pool of practitioners trained nationally.

Alcoholism/Substance Abuse Program Branch

The Alcoholism/Substance Abuse Program Branch (A/SAPB) of the IHS, originally known as the Office of Alcohol Programs, was established in March of 1978. Title II of Public Law 94-437 (Indian Health Care Improvement Act) authorized the transfer of mature (6 years of operation) Indian alcoholism projects from the administrative jurisdiction of the National Institute of Alcohol Abuse and Alcoholism (NIAAA) to the IHS. The transition of all (158) Indian alcoholism programs funded by the NIAAA was completed at the beginning of fiscal year 1983. Presently, the IHS funds 309 Indian alcoholism service contracts in Indian reservations and urban communities.

A/SAPB was situated in the Office of the Director until April 1984, when it was placed in the Division of Clinical and Preventive Services in IHS's Office of Program Operations. Organizationally, the A/SAPB consists of seven headquarters positions, three located in Rockville, Maryland, and four in Albuquerque, New Mexico. The administrative staff link with IHS service areas and programs through area alcoholism coordinators. Area alcoholism coordinators, in turn, relate to local-level alcoholism and substance abuse programs through project officers, who may be members of an IHS service unit or area staff.

---

[8] The actual number would depend on the child user population in the service unit.

[9] As a result, ambulatory care is believed to be inadequate in publicly funded settings (323).

[10] OTA's adolescent health assessment will estimate the total cost of mental health problems among U.S. adolescents, a figure that will include an estimate of expenditures for mental health treatment services for adolescents.

The most extensive summary of IHS alcoholism programming efforts can be found in Peake-Raymond and Raymond's (249) report that identifies and assesses a series of model projects. Peake-Raymond and Raymond and other reports (e.g., 5,6,57,343) found that virtually no alcoholism services were designed for Indian adolescents and that there was little coordination or continuity of care among alcoholism, social service, and mental health programs.

The A/SAPB is responding to these deficiencies (345,349) (table 26). Recent initiatives, made possible through 1986 Omnibus Drug Act funding, led to the development of a youth services component that began in fiscal year 1987 (349). IHS reports three elements to its A/SAPB youth services component: prevention, outpatient treatment, and residential treatment. In fiscal year 1987, 445 Indian youths were treated as outpatients, and 147 were treated in residential facilities (349). Two 24-bed regional adolescent substance abuse treatment centers were providing services by fiscal year 1988.[11] By the time all residential treatment facilities for substance abuse have been opened, there will be one in each of eight areas (350).[12]

In 1988, IHS reported a commitment to providing services to all Indian adolescents diagnosed as needing alcohol and drug abuse treatment, to providing community-based aftercare to all adolescents and adults hospitalized for alcohol and drug abuse treatment, to fully integrating alcohol and drug abuse treatment services into the IHS health care delivery system, and to funding and evaluating five demonstration projects for innovative Indian alcohol and drug abuse prevention projects (349). IHS concluded, however, that community commitment to change held the key to reducing Indians' alcohol and substance abuse.

Table 26—Overview of IHS Alcoholism/Substance Abuse Program Branch

Needs identified:
- New, more reliable diagnostic tools
- New discharge classification system
- New program models for treatment and prevention
- More specific contract requirements
- Eligibility criteria for services
- Education/training program to ensure competence
- Overall plan to improve program operations

Objectives developed to address deficiencies:
- Standardize development of prevention programs, with emphasis on Indian youth and families
- Standardize and develop a network of community-based treatment services for alcoholics and family members
- Develop a series of research projects on alcohol abuse among Indians
- Develop a system that meets the needs of IHS and Indians for alcoholism data
- Establish standards of care and staffing resource methodology
- Develop evaluation and quality assurance measures
- Provide technical assistance to staff of alcoholism programs, and to all IHS professional staff
- Provide additional resources to projects with the greatest need
- Integrate alcoholism treatment into the overall IHS health care delivery system

SOURCES: **Needs:** M.P. Peake-Raymond and E.V. Raymond, "Identification and Assessment of Model Indian Health Service Alcoholism Projects," contract No. 240-083-0100, unpublished report submitted to the U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, Rockville, MD, 1984; **Objectives:** U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, Office of Health Programs, "IHS Alcoholism/Substance Abuse Prevention Initiative" (Rockville, MD: 1985).

Bureau of Indian Affairs

The Bureau of Indian Affairs (BIA) was established in 1824 as part of the War Department and became a part of the U.S. Department of the Interior (DOI) in 1849, when DOI was created. In 1977, DOI established the position of Assistant Secretary for Indian Affairs for the supervision and direction of the BIA.

The BIA works with Indian tribal governments and Alaska Native village communities. It provides educational programs to supplement those provided by public and private schools. BIA assistance also is available for Indian college students, vocational training, adult education, gifted and talented students programs, and single parent programs. Finally, the BIA collaborates with tribal governments to provide a variety of social services, police protection, and economic development efforts.

---

[11] These were located at the ACL Hospital in San Fidel, New Mexico, and the Cherokee Nation of Oklahoma in Tahlequah.

[12] Three areas (Bemidji, Billings, Portland) decided to continue to purchase care on a contract basis, some because no Federal facilities that could be renovated existed (350). The Office of General Counsel for U.S. DHHS had advised IHS that funds provided by Public Law 99-570 could only be utilized for renovation or construction of Federal facilities. The Phoenix and Tucson areas will share a facility.

In total, $8.6 million was made available to IHS, and through IHS, the tribes, for renovation, construction, and staffing of residential treatment facilities in fiscal years 1987 and 1988. In fiscal year 1987, a Model Staffing Pattern for a 24-bed facility was developed and distributed to each IHS Area Director for use in approving applications; in fiscal year 1988, because funds were more limited, approximately $350,000 was distributed to each area to develop, with tribal consultation, a mechanism to provide residential treatment to youth in their Areas (350).

In recent years, two major laws have resulted in a restructuring of mental health-related BIA programs. In 1975, the passage of the Indian Self Determination and Education Assistance Act (Public Law 93-638; amended in 1988 by Public Law 100-472) facilitated contracting for the operation of education programs by tribal groups. The passage of Public Law 95-561, the Education Amendments Act of 1978 with technical amendments in Public Law 98-511 (Education Amendments of 1984) and Public Law 99-89 (Indian Education Technical Amendments Act of 1985), mandated a major change in the operation of both BIA-operated and tribally contracted schools. The implementation of Public Law 95-561 (Education Amendments of 1978) resulted in decisionmaking powers for Indian school boards, local hiring of teachers and staff, direct funding to the schools, and increased authority for the Indian education programs within the Bureau.

In the 1987-88 school year, the BIA funded a total of 182 education facilities (table 27). BIA education programs furnish BIA-funded schools with curriculum materials and technical assistance to develop and implement alcohol and substance abuse programs, with special emphasis on identification, assessment, prevention, and crisis intervention through the use of referrals and additional counselors at the schools. Boarding schools also depend on a number of BIA personnel, typically social workers, educational psychologists, and special educators, to screen for, intervene with, as well as monitor students who experience social and mental health problems. Much of this effort takes place within the context of the local Intensive Residential Guidance program. In 1988, the BIA reported that 19.2 percent of all Indian children were in BIA-funded schools (359).[13]

The BIA also funds Indian Child Welfare Act programs that provide a wide range of human services. These services, which are managed by tribes, often address the social and mental health problems of Indian adults seeking to retain or reassume parental responsibility for their children as well as of Indian children subject to the stresses inherent in foster care and adoption. Although the ultimate disposition of the cases is not well documented, Indian Child Welfare workers are known to play a role in identifying abused adolescents in need of mental health services, and in attempting to see that these needs are met (table 28). However, a lack of treatment resources for children and their families was among the barriers identified in a 1989 BIA/IHS Forum on Child Abuse (362) (table 29).

Table 27—Overview of U.S. Department of the Interior, Bureau of Indian Affairs (BIA) Educational Programs

BIA operates directly:[a]
- 57 day schools
- 40 on-reservation boarding schools
- 6 off-reservation boarding schools
- 9 dormitories (to facilitate attendance in public schools)

Operated by tribes with BIA contracts:[a]
- 54 day schools
- 10 on-reservation boarding schools
- 1 off-reservation boarding school
- 5 dormitories (to facilitate attendance in public schools)

Under Johnson-O'Malley Act of 1934
(48 Stat. 596), the BIA provides funds:
For special education for 201,162 Indian students in public schools

Under Education for All Handicapped Children Act
(Public Law 94-142), the BIA provides funds:
For handicapped Indian students in approximately 25 facilities

[a] Figures for FY 1987-88.

SOURCES: Development Associates, "Final Report: The Evaluation of the Impact of the Part A Entitlement Program Funded Under Title IV of the Indian Education Act," Arlington, VA 1983; and U.S. Department of the Interior, Bureau of Indian Affairs, *Report on BIA Education: Excellence in Indian Education Through Effective School Process* (Washington, DC: U.S. Government Printing Office, 1988).

The BIA also plays a major role in the law enforcement and criminal justice systems in many reservation communities. These systems frequently encounter mental health-related issues, such as the detention and diversion of Indian adolescents involved with alcohol and substance abuse, and those who experience serious emotional disturbance. This involvement is likely to increase, as outlined in the joint BIA-IHS Organizational Management Action Plan (361).

Tribal Health Programs

As a consequence of Public Law 93-638, the Indian Self-Determination and Education Assistance Act, many tribes have assumed administrative control of local health programs, either partially or in their entirety. Scopes of work and monitoring are negotiated on an individual basis, leading to consid-

---

[13] In 1938, approximately 39 percent of Indian children were in BIA-funded boarding schools (359).

Table 28—Responsibilities of Local Child Protection Teams

Provide oversight:
- Monitor child abuse and neglect activities to ensure adequate preventive, protective, and corrective services are provided
- Review and track all child abuse and neglect cases which have been referred
- Investigate cases to determine whether the best interests of the children are being met
- Review case plans for their adequacy
- Maintain confidentiality of information
- Send local CPT data to area CPT

Facilitate provision of services:
- Receive child abuse and neglect referrals, assign case managers to track cases
- Identify available community resources, programs, and services
- Provide recommendations to various pertinent agencies
- Promote cooperation, communication, and consistency among agencies
- Provide a forum for debating what actions would be best to promote the well-being of Indian children
- Respond to inquiries from the community, area CPT, and other individuals and groups

Provide technical assistance:
- Develop procedures to provide effective and efficient preventive, protective and corrective child abuse and neglect services
- Develop standards to determine which cases are to be investigated
- Provide information and technical recommendations to decisionmaking agencies
- Educate communities about child abuse and neglect problems and solutions
- Identify danger signs which prompt intervention and/or preventive actions
- Assist in the development and implementation of plans to promote long-term well-being of children and their families
- Assist in the development and implementation of strategies by communities to create environments which provide opportunities for community members to lead meaningful, productive, self-fulfilling, and rewarding lives

SOURCE: U.S. Department of the Interior, Office of the Secretary, Assistant Secretary, Indian Affairs, and Director, Indian Health Service, Washington, DC, "Establishment of Child Protection Teams and Mandatory Child Abuse and Neglect Reporting and Referral Procedures," memorandum to all BIA Area Directors, all BIA Area Education Programs Administrators, and all IHS Area Directors, signed Apr. 2, 1987.

Table 29—Barriers to Effective Child Protection Services

Prevention is not a priority:
- health promotion/disease prevention are low priorities
- alcohol/substance abuse prevention lacking
- worker time is consumed in crisis management

Community barriers:
- lack of awareness/denial
- lack of community education
- prevalent alcohol/drug abuse
- lack of alcohol/drug abuse prevention/treatment
- voice from tribal leadership for child advocacy missing
- lack of treatment resources
- interference in tribal court proceedings

Disorganized child abuse management:
- suspected cases are not always reported
- register and tracking system not in place
- mutually agreed procedures are not established
- unauthorized release of confidential information
- lack of agreement on definitions
- no local interagency memorandum of agreement
- lack of communication between workers; no team case manager not identified
- delayed investigations
- delayed prosecutions
- cases submitted to tribal courts after Federal declination
- inconsistent and unsympathetic investigators/prosecutors
- inadmissible evidence
- unclear team leadership
- dysfunctional team
- uncertain information exchange
- decisions not clearly documented
- failure to develop and mandate treatment plans for dysfunctional families
- violations of Indian Child Welfare Act (ICWA)
- statistical surveillance is inconsistent/cumbersome

Inadequate child protection services:
- lack of foster homes (especially Indian/Native) in home communities
- lack of emergency shelter for children
- unacceptable foster homes
- ICWA grants are competitive
- unavailable treatment in home community
- insufficient staffing due to: lack of funds, unfilled positions, staff turnover, staff burnout
- inadequate staff expertise: lack of appropriate specialists, lack ongoing training programs
- excessive staff workloads
- insufficient mental health treatment resources

SOURCE: U.S. Department of the Interior, Bureau of Indian Affairs, and U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, National Oversight Committee on Child Protection, "Forum on Child Protection in Indian Country: A Report," unpublished report, April 1989.

erable variance in reports of program activities and services. A recent analysis by the IHS Office of Health Program Development (OHPD) provides one of the few, albeit limited, overviews available of this system of care (344).

OHPD identified 174 tribal health programs that received substantial IHS funding under Public Law 93-638 in fiscal year 1985 programs. Eighty-five percent (148) of the existing programs completed and returned the profiles. Approximately 42 percent of the tribal health programs reported providing mental health services, but only 3 percent of tribal health staff worked in mental health services, indicating limited provision of such services (table 30). Ten percent of the tribal health programs reported that mental health services were not available at all. Programs were not asked about mental health services specifically for adolescents, but the paucity of mental health staff suggests that adolescents would not be provided adequate mental health care.

Table 30—Overview of Tribal Health Programs[a]

Eligible population:
- Total IHS support was $206.5 million
- Tribes received another $31.6 million from other sources
- $23.7 million from IHS was earmarked for alcoholism programs
- $28.5 million from IHS was dedicated to community health programs

Percent of tribal community health programs providing specific services:
- 75.2%: alcoholism
- 64.7%: drug abuse
- 50.5%: social services
- 85.7%: outreach and referral
- 64.9%: health education
- 54.8%: home health
- 50.0%: community health nursing
- 41.7%: mental health

Mental health services:
- Are reported as totally not available by nearly 10% of programs
- 22% of the programs provide mental health services through IHS
- 10.2% of the programs provide mental health services through contract care

Staff (full-time equivalent):
- 13.5% work on alcoholism/substance abuse programs
- 3.1% work in mental health
- 2.9% work in social service

[a] Figures represent self-reporting by 148 tribal health programs; this represents 85% of all tribal health programs in the United States.

SOURCE: U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, Office of Health Program Development, "Final Report: Descriptive Analysis of Tribal Health Systems," May 1987.

Urban Indian Health Programs

In 1972, the IHS began to fund urban programs through its community development branch under general authority of the Snyder Act. Since then, 42 different projects have received financial support from IHS. The Indian Health Care Improvement Act of 1976 authorized urban Indian organizations to contract with IHS to operate health centers and to increase Indian access to public assistance programs. There are currently 35 urban Indian health programs that encompass 40 urban areas in 20 States. A recent study by the American Indian Health Care Association (AIHCA) (11) provides insight into the nature and scope of these programs, although the data are not specific to adolescents (table 31).

Urban Indian health projects are different from IHS reservation-based clinics in their emphasis on increasing access to existing services funded by other public and private sources rather than providing or paying for services directly. However, their single largest source of funding is the IHS Urban Indian Health Program. This source of funding is followed by some IHS funding for categorical services such as alcohol and substance abuse services. Urban Indian health programs have not been eligible for mental health funding through IHS, however, because such funds are used only to provide mental health services to Indians remaining on or near reservations. This creates a problem for the large percentage (estimated to be about 50 percent [322,355]) of American Indians who live in cities, as they have severely limited access to culturally specific mental health services.

Many smaller urban Indian health programs offer mental health services as part of primary medical care; mental health problems that cannot be managed by the primary care provider are referred to outside resources. Other urban programs receive categorical funding for substance abuse or child welfare problems, and address mental health problems within the context of these services. Still other, larger urban programs are able to provide a range of onsite mental health services with funds received through such sources as mental health Block Grants and community mental health center funds. On average, expenditures for mental health services represent about 3.8 percent ($600,000 per year) of all ambulatory health services provided by urban Indian health programs.

As is evident in table 31, the mental health counseling needs that urban Indians present are not those which respond to short-term, crisis-oriented counseling. Among these needs are child abuse and child behavioral problems. Each of the 35 urban Indian health programs surveyed by AIHCA identified mental health needs among their client populations that could not be addressed for lack of staff, funding, and referral sources. Between 1985 to 1987, the total number of onsite mental health providers ranged from 15 to 20 for all urban programs, representing less than 4 percent of the entire staff. During this period the average number of users per full-time provider more than doubled, and the number of visits per provider also increased. Several of the respondents in the AIHCA study reported that available services are of poor quality and that waiting periods for services are excessively long.

Table 31—Overview of Urban Indian Mental Health Programs

Mental health expenditures:
- Have remained at about 4% ($600,000 per year)
- Expenditures were up in 1986 due to one-time grants to three programs
- Per person expenditures declined by almost 50% from 1985 to 1987
- Per visit expenditure declined about 10% in that same period

Usage of mental health services:
- Ranged from a low of about 10,000 contacts in FY 1985 to a high of about 22,000 in FY 1984
- In 1987, there were 12,000 mental health encounters
- Follow-up declined from 6.2 per user in 1985 to 3.8 per user in 1987
- While usage was up dramatically, funding and staff did not increase; this may explain the decline in follow-up visits

Mental health services offered (in descending order of frequency):
- Referral to outside agencies (most frequent)
- Drug and alcohol abuse services
- Child counseling
- Community outreach
- Marital counseling
- Domestic abuse counseling
- Various group counseling services
- Group support
- Psychological testing
- Family counseling
- Crisis intervention

Mental health problems encountered, in descending order of frequency:
- Drug and alcohol abuse
- Cultural adjustment issues
- Family problems and dysfunction
- Child abuse, depression, and low self-esteem
- Domestic violence
- Spousal violence
- Poverty
- Anxiety
- Child behavioral problems
- Suicidal tendencies
- Unemployment
- Stress
- Grief
- Racism

Staff (in descending order of frequency):
- M.S.W. social workers
- Drug and alcohol counselors
- B.S.W. social workers
- M.S. psychologists
- M.S. counselors
- Ph.D. psychologists
- Psychiatrists
- Prevention specialists
- Indian Child Welfare counselors
- Interns

SOURCE: American Indian Health Care Association, "Mental Health Services Delivery: Urban Indian Programs," St Paul, MN, 1988.

State and Local Service Agencies

Very little information exists about the extent to which such local agencies as community mental health centers and State psychiatric facilities serve Indian communities. It seems fair to assume that numerous Indian people obtain care from these settings, especially in urban communities. However, the diverse points of entry into this system—e.g., State hospitals, day treatment centers, Social Security Administration, the criminal justice system, detoxification facilities, and vocational rehabilitation centers—yield a confusing and often unmanageable set of service use data. For example, in the State of Oregon alone, there are over 30 service agencies that potentially may see emotionally disturbed Indians (244). A recent survey by Denver Indian Health and Family Services, Inc., an urban Indian health program, revealed that 71 municipal, county, State, and private agencies offered mental health services within the immediate metropolitan area (75). Less than 40 percent of these agencies' patient information systems track ethnicity, although virtually all of them (91 percent) answered affirmatively when asked if they could recall having had an Indian patient in care during the month prior to the survey. This is not, of course, an indication of the extent of care available to Indians from non-IHS agencies.

Though established in part for the purpose of reaching high-risk minority populations, community mental health centers (CMHCs) tend to underserve them (386). This occurs even in catchment areas that have significant numbers of non-White residents. American Indians, in particular, appear to use these facilities far less frequently than other segments of the American population (302,303,381). Sue (302), in a 3-year survey of 17 community mental health centers in Seattle, Washington, reported that 55 percent of the Indian patients seen were highly unlikely to return after the initial contact. This was a much more significant non-return rate than that observed for Black, Asian, Hispanic, or White patients. Information specific to adolescents is not available.

MENTAL HEALTH TREATMENT SETTINGS AND SERVICES AS ADAPTED TO AND BY AMERICAN INDIANS

Treatment Settings

There is a consensus that a well-integrated, community-based continuum of services could improve the mental health of children and adolescents (301,323). This consensus applies as well to Indian and Native communities. An array of treatment settings is needed to promote more rapid movement to less restrictive environments and to decrease reliance on more expensive forms of treatment. Graduated, transitional aftercare programs in the community can sustain and enhance therapeutic improvement.

In discussing the array of treatment settings, however, it is important to distinguish between the needs of the community as a whole and each individual. Communities may require the full array of treatment settings in order to meet the diverse needs of individual adolescents. Only the most disturbed individuals will require the full array of treatment settings, from psychiatric hospitalization to aftercare services. If treatment is effective and made available in time, less restrictive alternatives such as outpatient care may be sufficient, although they may be required on a continuing basis. A general principle of mental health care, especially for children and adolescents, is that it be provided in the least restrictive setting (323).

From the community perspective, and sometimes from the perspective of the individual, a continuum of settings includes, at a minimum, inpatient treatment in a psychiatric hospital, a residential treatment center, a partial hospital program, and an outpatient service. Conceived more broadly, the continuum encompasses a wider range of services, especially those involving child welfare, such as therapeutic foster and group homes and home-based interventions. Other possibilities include structured recreational activities, before- and after-school programs, case management, and respite programs.[14]

Each element in the continuum performs a special function and employs different admission criteria. For example, typically psychiatrists and nurses in psychiatric hospitals diagnosis and treat patients who are extremely disturbed and require intensive mental health intervention. Hospitalized patients often attempt, threaten, or contemplate suicidal or assaultive behaviors, although adolescents may be hospitalized for much less serious disturbances (e.g., running away from home, experimentation with drugs). Hospitalized patients may also suffer from severe cognitive, behavioral, and/or affective disorders that preclude independent functioning in the home, school, or community. The psychiatric hospital can provide specialized diagnostic services, facilitate the stabilization of medication regimens, and introduce therapeutic leverages that are lacking in less restrictive settings.

Residential treatment centers also provide 24-hour supervision, but usually serve more chronic patients who are either less severely disturbed or already stabilized in their treatment. Limited psychiatric or nursing care is available; neither close observation nor individualized care are typical. Patients are not actively suicidal or homicidal, though the potential may exist. They generally do not pose a significant danger to themselves or to others.

Partial hospitals offer special schooling and a structured, intensive, therapeutic milieu to patients who are able to live at home. Such settings are not designed to manage assaultive or suicidal adolescents, or those who may need seclusion or restraint. Families or guardians are expected to support the child's treatment and provide transportation on a daily basis.

Outpatient care enables children to remain in or return to their families, schools, and communities while continuing to progress or maintaining gains achieved through other therapeutic settings. Outpatient care can be provided in publicly funded clinics, the offices of private practitioners, and in comprehensive, youth service centers (e.g., 73).

For adolescents, a recent innovation has been to provide mental health services in or immediately adjacent to schools, thus making the services more immediately available and accessible (59,90,227). Because of limited funding and the wide range of services that school-linked youth services centers attempt to maintain, the mental health services available are often limited. However, when provided, they have proven to be one of the most sought-after of the school-linked health services, and through them, schools have uncovered numerous mental health problems that previously had gone undetected.

---

[14] For more detail, see U.S. Congress, OTA (323).

A comprehensive continuum of care also augments more traditional mental health programs through ancillary services. Therapeutic foster homes are operated by specially trained and clinically supported couples who serve in parental roles for several foster children. Such homes offer a highly structured living environment that is well suited for younger children whose major needs include stability, security, and nurturance.

Therapeutic group homes are better suited for older adolescents. They live together with perhaps 10 to 12 peers and a trained couple, who function as adult role models and staff. Like therapeutic foster homes, group homes provide a living environment that falls somewhere between institutional and family care. Both foster homes and group homes may serve as the child's or adolescent's primary form of treatment, or may work in tandem with partial hospitalization or outpatient care.

Home-based interventions introduce treatment directly into the family setting. Generally supportive, directive, and practically oriented, home-based interventions are usually indicated for highly disorganized, hard-to-reach families who will not participate in office-based therapies. Home-based interventions may be used alone or in concert with other elements of the continuum.

Although the continuum of care just described is the ideal, the general paucity of treatment options for Indian children has been a recurrent theme over the last two decades. Schools and social service programs seem to play more prominent roles than in non-Indian communities but the major setting for treatment is clinic-based outpatient care. Innovative home-based and group home interventions are much less common, but still in evidence (276). Intensive care in residential treatment centers and partial as well as full psychiatric hospitalization is almost nonexistent. Such intensive care requires the mobilization of extremely scarce resources, poses significant transportation problems, and almost always removes the child or adolescent entirely from family, community, and the other supports.

An equally serious problem in these communities is the fragmented and discontinuous nature of care within and across treatment settings, regardless of their scope. In part, this lack of coordination springs from the rural, isolated environments typically associated with Indian communities. However, disciplinary, institutional, and jurisdictional barriers may pose even greater barriers. Within the IHS, for example, collaboration between mental health and alcohol programs is rare, because of different perceptions of illness and competing philosophies of care. Well-coordinated efforts among IHS, BIA, and tribal agencies are also the exception. Interagency rivalries, differing views of accountability, different eligibility requirements, and incompatible program goals often undermine necessary working relationships. Mistaken assumptions about jurisdiction and governmental obligations impede ready access to the treatment settings. Perhaps one of the toughest challenges that faces any attempt to develop a coordinated continuum of care is to blend and coordinate community resources and talents with those of the mainstream systems of care provided directly by IHS and other agencies. None can stand alone in meeting the mental health needs of Indian children; together, they hold considerable promise for maximizing the impact of the available care.

Therapeutic Interventions

A wide array of types of therapeutic interventions is in use in American Indian and Alaska Native communities today. In planning for a broadly based mental health program, it may be helpful to understand the major categories of approaches to therapy, some typical forms of each, and their relative strengths and liabilities. Unfortunately, despite increasing efforts to offer much needed care to Indian youth, very little is known about the availability or effectiveness of these services. Systematic evaluation is virtually nonexistent; even careful description of content, form, and related aspects of process is rare. In order to get a sense of the range of therapies being used in Indian communities, OTA searched the social, behavioral, and health sciences literature, including fugitive documents such as program reports and organizational newsletters. Descriptive information obtained from these sources is included in the following discussion. A more general treatment of these therapeutic interventions can be found in the reviews by the U.S. Congress, Office of Technology Assessment (323) and the Institute of

Medicine (144).[15] Where the effectiveness of specific treatments has been evaluated, it is noted in the discussion.

Psychopharmacology

In their comprehensive review of recent developments in psychopharmacology for children and adolescents, Campbell and Spencer (54) concluded that many questions remain unanswered in regard to the efficacy and safety of numerous medications (also see 144,323). Much work needs to be done with respect to optimal drug choices for treating such illnesses as schizophrenia and depression. Nonetheless, psychopharmacological forms of intervention are being employed with increasing frequency among adolescents in the non-Indian population. Though potentially beneficial, the use of medications with Indian adolescents deserves close study especially since Indian patients taking psychotropic drugs frequently receive their prescriptions from primary care physicians and often are not seen by mental health and/or social service providers (124). Medication is most effective when taken in the context of a psychotherapeutic relationship (323).

Individual Psychotherapy

If any single therapeutic modality can be said to be the mainstay of mental health treatment, it is psychotherapy. The relationship between a therapist and client or patient is the best known means of treating mental health problems, although there is a great diversity in the approaches psychotherapists use. These include psychoanalytic, behavior and learning theory-based approaches, and supportive and client-centered approaches. A great variety of approaches or schools of psychotherapy can be found in Indian and Native communities.[16]

Psychoanalytic Therapy—Devereux's description (77,78) of his work with Plains Indians, though dated, remains the most significant discussion of the psychoanalytic approach to individual psychotherapy although it was not specific to adolescents. He focused on issues pertaining to transference, to dreams and visions, and to therapeutic objectives. Devereux recalled examples of each of these issues from his own practice and demonstrated how the correct interpretation of, as well as the response to, transference behavior among Plains Indians requires an understanding of their familial roles and patterns of social interaction. Boyer (45), Jilek-Aall (149), Duran (91), and others have written more recently about various aspects of psychoanalysis with American Indian patients, sometimes adolescents, but they do not approach Devereux's description and explanation of the inherent therapeutic dynamics.

Psychoanalytic thought has given rise to a number of other schools and techniques of psychotherapy, including transactional analysis, gestalt therapy, and existential therapy. These approaches are practiced, usually infrequently, in Indian communities. None, unfortunately, has occasioned any written accounts of their application with Indian adolescents or adults.

Behavioral and Learning Therapies—Several well-known interventions with Indian adolescents have been based on behavior modification. Goldstein (114) described a program implemented in a BIA boarding school that employed dormitory counselors to reshape problems of student living using reward, mild punishment, desensitization, discrimination learning, and extinction techniques. His experience underscored the need to understand culturally meaningful contingencies and to draw on natural reinforcers that are specific to the social ecology. Galloway and Mickelson (110) reported another school-based program that sought to modify North Carolina Indian children's "passive resistance to adults, withdrawal in the face of threat, and peer orientation with a subsequent lack of attention to adults" (p. 150). They recognized that such behaviors are deeply rooted in the cultural rearing of the children, but argued that their academic success depends on the ability to act in accordance with mainstream classroom expectations. The highly structured intervention, which used material and social reinforcements, extinguished the undesirable behaviors and gave rise to behaviors valued by the teachers. The authors, however, highlighted another major issue that may arise in using behavioral therapies with Indian adolescents. They found reason to be concerned that such changes may extend beyond the situations for which they were originally intended, thereby engendering conflict in other social arenas such as families and communities.

---

[15] These sources do not separate children's services from adolescents' services. The U.S. Congress, Office of Technology Assessment, will be addressing mental health services specifically for adolescents in its forthcoming full report on adolescent health.

[16] There is wide diversity of opinion about the effectiveness and fundamental characteristics of psychotherapy. A decade ago, studies appeared to demonstrate that the process of psychotherapy depended not on the learning and formal training of the therapist, but on personal characteristics such as genuineness, warmth, and empathy (172). Therapeutic orientation seemed to make no discernible difference in the overall course of treatment. Indeed, studies of the time supported the contention that formal training makes little or no difference to therapeutic outcome, and that untrained people with warmth, genuineness, and empathy produce, overall, as good or better results than trained therapists. The last decade has modified these conclusions; a number of psychotherapeutic interventions have been shown to be effective for specific problems (323,374). However, considerable work remains to be done on the effectiveness of individual psychotherapy with adolescents (144,323). Almost no systematic research has been done on the effectiveness of individual psychotherapy with Indian adolescents.

Thus, there are potential disadvantages, as well as advantages, to using behavioral and learning theory-based therapies with Indian youth. Behavioral therapies tend to pay little attention to internal states or feelings, usually require a high level of motivation and activity, and are seldom satisfying intellectually. Consequently, some clinicians report that such behavioral techniques meet marked resistance with many Indian patients who hold strong cultural beliefs that will and intellect can master mood and behavior. For these reasons, cognitively based therapies tend to be more easily accepted by Indian adolescents. The relatively new school of cognitive therapy (see ref. 323), for example, assumes that internal thought models about people, relationships, and events give rise to actions and feelings. The therapist and the patient attempt to develop new ways of conceptualizing events and relationships in order to counteract cognitive models that lead to maladaptive thought and behavior.

Supportive and Client-Centered Psychotherapy—Supportive and client-centered therapies are linked more by their use in the field then by their ideological roots. Supportive psychotherapy evolved in the context of the psychoanalytic movement, as a vehicle for caring for patients too ill or incapable of forming the relationships necessary for psychoanalytic or insight-oriented psychotherapy. Client-centered psychotherapy, in contrast, was developed by Carl Rogers, a psychologist, as a reaction to the "medical model" of mental health espoused by behaviorists, psychoanalysts, and some psychiatrists (130).

Supportive and client-centered techniques tend to merge in practice. Supportive psychotherapy is not intended to produce change in the patient through the therapist. Instead, the objective is to make the patient feel better about him-or herself, and to provide gentle help and advice about activities of daily living. The therapist assists the patient's return to a prior functional level, and helps him or her to learn to tolerate difficult situations.

Client-centered or "Rogerian" therapy is predicated more explicitly on the relationship between the client and the therapist. Unlike psychoanalytic psychotherapy, the aim is for the patient to experience the therapist as a genuine, accurately empathic, caring person, who reflects the patient back to him-or herself. Rogerian therapy is built around a number of concrete interviewing techniques that almost all trained therapists learn at some point.

Taken together, these two forms of therapy are often employed by beginning therapists and those who practice in difficult and uncertain situations. Those most likely to respond to supportive and client-centered therapies typically are at risk for deterioration as the result of more severe illnesses, or suffer from situational problems and normal grief.

Clinical observation suggests that supportive and client-centered therapies are probably the most common of all the different techniques in use in Indian mental health programs. An overwhelming number of young Indian people experience situational problems and grief. Consequently, these techniques may be initially appropriate for most of them who are seen in Indian mental health programs. In addition, relatively little training is required to provide either type of intervention. However, supportive therapies by themselves may be ineffective for some patients, and some clinicians believe that political safety may be one of the more disconcerting reasons for the popularity of these therapies in Indian communities. In some other therapies, a patient may become angry with his or her therapist as a normal part of the therapeutic process. The supportive therapist is not required to do anything that might endanger his or her standing in the clinic or in the community.

Group Psychotherapies

As Edwards and Edwards (93) noted, the use of group therapy is growing in programs that serve Indians and Natives, as it is in many public mental health settings. One explanation of this trend is that it is an outgrowth of the natural emphasis on groups in the social ecology of most Indian communities. Another explanation is the low cost of group psychotherapy compared to individual psychotherapy.

This relatively new movement contrasts sharply with prior assertions that group psychotherapy is inapplicable with American Indians and Alaska Natives. These assertions stemmed from three assumptions. First, Indians have been stereotyped as being stoic and silent. Second, it was presumed that an unspoken solidarity among Indians would preclude the involvement of non-Indians as either fellow patients or group leaders. Third, it was believed that Indians' social norms, which disapprove of setting oneself apart from others, would repress the therapeutic expression of fear, weaknesses, or problems. An increasing number of examples of the apparently successful adaptation of group approaches in the treatment of young Indian and Native patients suggests otherwise. As with other forms of mental health treatment for Indian adolescents, group psychotherapies have not been systematically evaluated. It may be important to note that most of these group psychotherapy described here is not group psychotherapy in the traditional sense, but consists more of support and self-help groups.

Single Issue Groups—Probably the most common form of group therapy in Indian communities is the support group organized around a single issue or topic. The format is often mixed, incorporating lectures on various aspects of the primary topic, testimonials, and support for troubled members. The group provides a context for mutual help and protection even outside of formal meetings, a tendency that is often discouraged in non-Indian therapy techniques. This model is one of the most rapidly growing therapeutic movements in Indian mental health today, and assumes a variety of forms in these communities.

A large number of single-issue support groups currently focus on parent-child relationships (table 32). Adolescent parents and parents of adolescents can participate in the more generic groups (193), but few groups are focused specifically on adolescents, either as parents (except see Salt River Pima-Maricopa) or children (except see United Tribes Educational Technical program for parents of students at tribal boarding school).

There are also therapeutic groups organized around specific problems such as sexually abused adolescents, rather than general psychosocial issues. Ashby, Gilchrist, and Miramontez (13) chronicled the development of a therapeutic group for Indian females who were experiencing problems of self-esteem and difficulties in relating to peers and/or adults. Wolman (385) described and analyzed the interpersonal dynamics of group therapy with late adolescent and young adult male and female Navajo alcoholics at a treatment ward in the Gallup (New Mexico) Indian Hospital. Merrill (224) systematically tested the effects of group therapy with Indian teenagers who exhibited significant symptoms of depression, anxiety, and substance abuse. Other popular types of support groups can be found in school settings and involve Indian youth at risk for a range of mental health problems (see table 33).

Currently the greatest impetus for single-issue groups among American Indians and Alaska Natives stems from the rapid growth of alcoholism programs. Anecdotal observations attest to the value and utility of these techniques. Systematic outcome research to determine the nature and extent of their efficacy has yet to be conducted and very few of them have been extended to Indian adolescents.

Self-Help Groups

Unlike other mental health interventions, self-help groups do not use a therapist. Rather, the group is organized and directed by its members, often helped initially by someone with a mental health background. Group members generate their own therapeutic movement and support, usually according to a set of known rules or principles. Self-help groups of many sorts operate in Indian communities around a wide variety of problems. Sexual abuse victims, children of severely mentally ill parents, and surviving relatives of suicide victims are among the most frequent types of local self-help groups. The Navajo Nation supports peer self-help groups which include tribal youth aged 12 to 25 many of whom have histories of abuse and/or neglect. The purpose of groups is to enhance the participants' self-esteem and to help them to feel more confident, but these groups have not been evaluated.

Family Involvement in Therapy

Family therapy is common in non-Indian mental health programs. It is a way to help disruptive families and thus their adolescent children or to help adolescents or their own families. However, family therapy is not nearly as common in Indian communities (15,101,136). Clinicians have observed that it is difficult to obtain the participation of all relevant family members or couples in the treatment process,

Table 32—Single Issue Groups for Parent-Child Relationships

Tribe/agency	Program	Participants	Focus	Format
Salt River Pima-Maricopa	Teenage Parents Support Group	Teen parents and significant relatives	Well being of teen parents and their children	Individual/group counseling and group activities; parent instruction
Yavapai Prescott	Parenting Education	Parents and children	Non-abusive child behavior management	Behavior management; Self-esteem/actualization
Colorado River Indian Tribes	Parental Support	Parents	Family management, parenting, job-search skills, goal development	Support groups and parent aides
Fort McDowell Mohave/ Apache	Parenting Skills (Two-part program)	Parents	Part One: Home/ Behavior Management Part Two: Parenting skills training	In-home parent aides and classroom instruction
Pima/Maricopa	Parents Are Teachers	Mothers and children	Self-reliant mothers being a positive force in children's lives	Twelve-week training that both mothers and children attend
Shasta County Schools	Child Care Referral and Education	Parents	Parental control and involvement in schools	In-home outreach workers and support groups
Cook Inlet Native Association	Parents in Need of Special Services (Two-part program)	Parents	Decrease parental neglect and abuse	In-home family aides and weekly group meetings
Fort McDowell Mohave/ Apache	Title II Child Welfare Program	Parents	Recognition and reduction of child behavior problems	Six-week course and monthly community education meetings
Michigan Indian Child Welfare Agency	Intensive Parent Aide Program	Parents and foster care parents	Promote family stability and basic parent education	Parent aides and support groups
Minnesota Souix	Group Parent Training Program	Parents	Parenting skills	"Systematic Teaching of Effective Parenting" (STEP)
Phoenix Indian Center	Parent Support Groups	Parents	Parenting skills	Weekly sessions incorporating traditional values
Red Cliff Band Lake Superior Chippewa	Parent Training Program	Parents	Parenting skills	Support groups using local tribal members as facilitators
Shoshone-Bannock	Parental Training for Pre-school Children	Parents	Child development and behavior modification	In-home and group meetings dealing with social and traditional values
United Tribes Educational Technical	Parent Effectiveness Training (PET)	Parents of students at Tribal boarding school	Parenting skills	Twenty-hour/twelve-week group training
Urban Indian Child Resource Center	Positive Parenting	Parents	Parental communication	Two-hour/six-week group sessions
Vern Jackson Receiving Home: Warm Springs	Basic and Advanced Parenting Skills	Parents	Culturally relevant parenting skills	Eight- and six-week group sessions

SOURCE: Office of Technology Assessment, 1990.

especially adult men. Yet, as summarized in table 34, at least five programs have adapted such techniques to local Indian families as part of their services to families at risk. Two of the programs focus on troubled adolescents (Warm Springs, Navajo Area Office), but none of the programs have been evaluated for their effectiveness.

Network Therapy and Related Techniques

Attneave (14) was the first to suggest that therapy with American Indians and Alaska Natives ought logically to proceed within the context of the extended family. The family and kin relationships of Indians and Natives represent their most potent and lasting socializing influence (257,281).

Table 33—Single Issue Groups for Indian Youth at Risk

Tribe/agency	Program	Participants	Focus	Format
Indian High School	Support for teen girls at risk	Pregnant adolescents	Child care/parenting with parent and roles	Classes/experience in day care, etc.
Various	Counseling for children at risk	4th, 5th, and 6th graders from dysfunctional alcoholic families	Dealing with feelings of abandonment	Individual and group counseling
Tohono O'odham	Reservation school group therapy program	Potential school dropouts	Decrease arrests, school absences, and dropouts	Paid to participate in group therapy
Navajo, Zuni, Oglala Sioux, Great Lakes Inter-Tribal Council	Foster grandparents	Tribal elders and needy, troubled, disturbed, and disabled Indian youth	Retention of culture	Individual and group instruction in native songs, dance, crafts, and customs

SOURCE: Office of Technology Assessment, 1990

Network therapy is useful in precisely the kind of complex social networks that exist among the agencies and extended families that occur in Indian/Native communities. It is particularly appropriate for troubled, multiple problem families.

Several recent efforts to apply family-network intervention with American Indians stand out. One, described by John Red Horse (258), involved mobilizing the extended families of Indians in crisis to assist in problem-recognition and problem-solving, to work through role conflicts, and to provide a collective form of therapeutic support. Other examples of the application of family-network intervention with American Indians can be found in Yvonne Red Horse's work (259) with young, pregnant, unmarried Indian adolescents. Neither of these programs have been evaluated. The difficulties with this form of intervention include expense arising from the number of professionals that it takes to accomplish the therapy and the fact that few therapists are trained in this technique.

Recreational and Outdoor Therapy

Recreational and outdoor therapy provide good opportunities for older children and adolescents to confront relationship issues with their peers, to master new and unfamiliar situations, and to establish constructive relationships. Recreational therapy is practiced in a variety of ways.

One distinction is between competitive and noncompetitive forms of recreation. Competitive sports teach some lessons about adulthood and the need to work cooperatively with others. However, unless great care is taken, competitive sports can tend to diminish the self-esteem of children and adolescents who are uncoordinated, or who are inept at acquiring group membership. Noncompetitive sports and outdoor programs offer several therapeutic advantages over competitive activities. By challenging one's self or nature, the adolescent learns valuable lessons about personal mastery and self-efficacy.

Examples of both competitive and noncompetitive recreational therapy are numerous in Indian communities (30). There is little evidence, however, to document the outcomes of these forms of therapy. Generally, recreational and outdoor therapies are nonspecific in their effects and are not central to the treatment of seriously emotionally and mentally ill adolescents. Such programs can, when used improperly, exacerbate an adolescent's problems and may provide the greatest benefit to those least in need (297). However, in the context of an overall treatment plan there may be a place for them to improve the functioning of children and adolescents, and as a tool for promoting physical health.

Traditional Indian Therapeutic Interventions

Many traditional Indian and Native healing practices are gradually being incorporated into contemporary approaches to mental health treatment of Indian adolescents (81). Indeed, there is increasing collaboration between health care providers and traditional healers. However, this collaboration has not been without the kinds of problems that one would expect from any cross-disciplinary effort (189). Several traditional therapeutic strategies have received considerable attention and invited attempts at integration into approaches to intervention with Indian adolescents: the four circles, the talking circle, and the sweat lodge (196).

The four circles refers to a symbolic process that uses a series of concentric circles to visualize and analyze the significant relationships in one's life. This approach is commonly used in counseling troubled youth among Northern Plains communities.

Table 34—Family Involvement in Therapy

Tribe/agency	Program	Participants	Focus	Format
Minneapolis Indian Health Board	Family Mental Health Program	Traditional elders; representatives of major tribes; families in crisis	Prevent breakup of families by Child Protective Services	Rituals, ceremonies, traditional healing practices, POW WOWs; routine crisis counseling/case management; use of extended family for child placement; comprehensive network review model
Yakima	Nak-nu-we-sha	Indian paraprofessionals, abused children and their families	End inappropriate removal of abused children from their kinship system; halt adoption of children off the reservation; increase community awareness of child abuse/neglect; develop positive alternatives to abuse/neglect	Foster care, medical counseling and receiving home services; case management; coordination of community resources and services with focus on the family. Intensive casework and advocacy services
Warm Springs Confederated Tribes	Whipper Man	Troubled children and adolescents	Reduce adolescent jail time; reduce off-reservation referral for foster care	Tribally operated group home; short- and long-term placement counseling; intensive outreach family counseling; out patient followup and case management
Salt River Pima/Maricopa	Family Support Program	Parents from community acting as parent advocates	Family crisis intervention. Providing culturally appropriate role models to families	During crisis, advocates spend time in homes of in-need families, doing counseling and assessment
Navajo Area Office, Indian Health Service		Depressed Navajo adolescents and their extended families	Treatment of depression and family dynamics	Weaving together of traditional. Navajo medicine with typical therapeutic tasks of family-based interventions

SOURCE: Office of Technology Assessment, 1990.

The talking circle is a unique form of group therapy and is a part of many Indian treatment programs. For example, in 1984, the Phoenix Indian Center began to use talking circles to help urban Indian families cope with child abuse and neglect (128). Between 1984 and 1988, more than 5,000 persons participated in the Indian Center's circles, and demand increases steadily. Other well-known examples include the Seattle Indian Health Board's program for street youth and the Native American Rehabilitation Association's youth alcoholism treatment program in Portland, Oregon.

The sweat lodge, best likened to a sauna that combines individual prayer and group therapy, has been incorporated into a number of IHS alcoholism and mental health treatment programs (127).

The IHS has not fared well in past efforts to admit traditional Indian psychotherapeutic interventions into its daily operations. Thus, such interventions are more characteristic of tribal programs contracted through the 638 mechanism.

Approaches Integrating Traditional and Western Techniques

A relatively new and apparently promising approach to improving the mental health of Indian adolescents (and Indian adults) is to combine both western-style professional mental health care with traditional Indian approaches. Written materials, although no rigorous evaluations, are available concerning programs implemented on the Salish-Kootenai Indian Reservation in western Montana (62,100,101). Three components distinguish the Salish-Kootenai approach:

- a strong clinical component using mainstream mental health care providers;
- a cultural program using tribal elders, meetings in long-houses, and a cultural specialist; and
- coordination with other community programs (62).

In an earlier youth-specific component of the program, young Indians chosen from the local mental health program participated in a class organized around cultural activities such as beading. Tribal elders taught traditional values and an experienced psychologist provided client-centered psychotherapy (100,101).

The Salish-Kootenai program is regarded highly by both the tribe (62) and the IHS (236), and similar approaches have begun to be used around the country (102). Such techniques may play a major part in Indian mental health programs of the future, especially for adolescents at high risk of mental health problems as a consequence of alienation and cultural adjustment problems. However, clinicians have expressed concern that efforts like this represent a highly sophisticated form of intervention that should not be confused with the extensive array of cultural heritage classes and traditional value groups that perform important, but not necessarily therapeutic, functions in many Indian communities.

PREVENTIVE AND PROMOTIVE INTERVENTIONS

Overview

Debate continues about the most appropriate set of terms by which to distinguish the broad domain of prevention from other approaches to or activities in mental health (161). The tripartite division of primary, secondary, and tertiary prevention, each with separate methodological emphases, enjoys the greatest currency (55). As Bloom (41) noted, the goal of primary and secondary prevention is to reduce the prevalence of disease or disorder in a given population, whereas the object of tertiary prevention is to ameliorate the discomfort or disability that attends an existing disease condition. Bloom (41), Wagenfeld (369), and others have argued that the latter actually falls outside of the realm of prevention since such efforts are not designed to decrease the occurrence of disease.

Primary prevention, which seeks to lower the prevalence of disease by reducing its incidence, can be accomplished in three ways: health promotion and enhancement, disease and disorder prevention, and health protection (42). Health promotion and enhancement involves building or augmenting adaptive strengths, coping resources, survival skills, and general health. In addition to focusing on the capacity to resist stress, health promotion and enhancement require an understanding of the conditions which generate stress and may negatively affect psychosocial functioning. There is very little research of this nature in the Indian mental health literature (188). Exceptions include work by Dinges, Yazzie, and Tollefson (82) on developmental task accomplishment among Navajo parents and children, by Kleinfeld (163) in her study of the characteristics of successful boarding school parents for Alaska Native students, by Lefley (178) in her research on the familial and social correlates of psychological health among Miccosukee children, and by Goldstein (115) in the Toyei model dormitory project.

Disease and disorder prevention encompasses a much narrower spectrum of concerns. It targets a specific disorder and, based on an analysis of risk factors, attempts to manipulate one or more conditions to forestall the occurrence of the disease. The vast bulk of primary prevention research in Indian mental health is of this type, but seldom moves beyond the identification of risk factors. Hence, the literature is replete with profiles of the "typical" Indian alcoholic, delinquent, addict, and suicide, and lacks data on the effectiveness of potential responses.

Health protection techniques employ regulatory and legislative action to reduce the probability that the disease agent and host will come into contact. Bonnie (44) discussed health protection in terms of four legal strategies: establishing the conditions of contact (availability), deterring undesired behavior through punishment, symbolizing an official posture toward the behavior, and influencing the content of messages in the mass media. With respect to Indian communities, the classic "experiment" in health protection has been the federally imposed (and in many places now tribal) prohibition of liquor sales and liquor consumption on reservation lands. Levy and Kunitz (182) and May (201) clearly demonstrated that the prevalence of "problem drinking" and of associated phenomena (accident, arrest, and homicide rates) are not necessarily lower and may be even higher on "dry" reservations than on "wet" reservations.[17]

Secondary prevention seeks to reduce the prevalence of disease or disorder through early case finding and treatment. A reduction in the duration of a case consequently decreases the total number of active cases at any given point in time. Research of this nature is extremely sparse in the American Indian and Alaska Native mental health literature. To permit earlier intervention and more appropriate treatment, researchers have begun to identify the relationships among psychophysiological symptoms, indigenous categories of illness, and research diagnostic criteria for depression within various tribes (e.g.,195). McShane and Plas' (220) study of the psychoeducational impact of otitis media, specifically of parent reports of the number of a child's ear infections as a means of early detection of psychoeducational problems, is another example. However, as with primary prevention efforts, these are not evaluations of the effectiveness of secondary prevention strategies.

---

[17] However, the more recent IAHS found a lower prevalence of alcohol use among Indian adolescents on reservations with more restrictive drinking laws (see ch. 2 of this Special Report).

Preventive and Promotive Efforts Specific to Indian Adolescents

A recent review of the published literature revealed approximately 45 articles that specifically describe prevention and/or promotive programs targeted to Indian adolescents (193). The interventions reported in this literature largely represent examples of promotional (65 percent) and primary prevention (73 percent) programming. There were no studies of how effective these efforts have been in accomplishing their respective intervention goals.

In an earlier review for the IHS of school- and community-based alcohol and substance-abuse prevention programs, counseling and referral, workshops and training, self-help and support groups, and driver education were the most numerous types of activities found (346). Adolescents were the most frequently mentioned target groups. This review also reported infrequent evaluation of program outcomes. Objective measures were employed in fewer than 30 percent of the identified preventive interventions. The greatest gains included increased participant involvement in outreach programs and increased reporting of abuse, family violence, and other forms of antisocial behavior. Actual decreases in such alcohol and substance abuse problems as arrests, suicide, abuse and neglect, and chemical dependency ranged from minimal to negligible.

Unfortunately, the published record does not reflect the extent to which preventive and promotive activities are currently underway in Indian communities. In order to get a sense of the range of such interventions, the NCAIANMHR contacted tribal agencies and community-based organizations requesting the following information: program sponsor, title, participant characteristics, intervention focus, and format. As of May 9, 1988, 194 programs were identified with significant preventive intervention activities. Nearly one-half of these programs were operated or sponsored by local tribes or native organizations; one-third were managed by private nonprofit groups, and one-quarter were administered by IHS. Of the actual preventive interventions, two-thirds involved counseling or psychotherapy and one-half provided education and training or case and program consultation. Roughly one-third emphasized recreational or cultural events. Programs were asked about the effectiveness of their approaches to which many responded affirmatively, but few acknowledged having gathered empirical data to support such conclusions. Clearly, additional work is needed to determine the characteristics of effective prevention programs.

CULTURAL SENSITIVITY IN INDIAN MENTAL HEALTH PROGRAMS

"Mental health" and "mental illness" can be controversial terms, involving as they do implications for the way a person thinks and the ways in which he or she interacts with others. In their effort to help meet the goal of the U.S. DHHS National Institute of Mental Health's (NIMH) Child and Adolescent Service System Program (CASSP) that services to minority children be appropriate, the CASSP Technical Assistance Center at Georgetown University recently published a monograph geared toward developing a "culturally competent" system of care (68). The needs of Indian children were among those considered when the CASSP team developed its report.

The CASSP analysis suggested that problems related to cultural variation can arise at several levels in the intervention system for mental health problems: policy, resources, training, practice, and research. At the *policy* level, the most important problem is that States have not had a specific focus in the area of services to children of color. Indians theoretically have their own source of health care in the IHS, but, as described previously, *resources* are scarce. In general, according to the CASSP team, minority-controlled programs and agencies continually struggle for survival: "With scarce resources it is difficult for such programs and agencies to develop culturally-specialized approaches or materials for use with their clients. Consequently they remain underdeveloped." The *training* of mental health professionals is troublesome in that there is a shortage of trained minority persons to work in the field, and the existing curricula for mental health providers inadequately address the needs of minority communities. When minority persons have successfully completed training, they sometimes find that the education offered by the nonminority institution serves to alienate them from their community rather than make them a resource (e.g., see 171).

Some of the *practice* issues uncovered by the CASSP analysis are cross-cultural issues, while others are applicable regardless of the service provider's identity. Cross-cultural issues include such areas as historic distrust, language and communication barriers, and culturally biased assessment techniques. Value conflicts, stereotypes, and unrealistic fears of minority clients can arise regardless of the service provider's identity. Many of these issues are of longstanding concern in the provision of mental health treatment and prevention services to Indians, and the need for cultural sensitivity is repeated whenever an evaluation of services is conducted (e.g., 355). These issues are of particular concern to adolescent mental health. One characteristic of adolescence is the experience of an "identity crisis" (97), and thus Indian adolescents may be more likely than Indians of other ages to experience distress as a result of feeling caught between two cultures (368). Problems with policy, training, and practice may be due in part to an inadequate *research* base on the characteristics and mental health needs of minority children and adolescents. According to Cross and his colleagues, current research too often fails to consider culture as a variable, and funding sources for research historically have not been sensitive to minority needs and thus do not follow direction from minority communities.

With the support of Congress, IHS has made an effort to bring more Indian mental health providers into the system. One hundred nine of the 198 mental health providers are Indians. However, most are social workers and mental health technicians (355). Only 4 of the 37 clinical psychologists are Indian. No psychiatrists are Indian.

Even Indian heritage does not guarantee "cultural competence." There is considerable diversity in language and heritage among the more than 500 Indian tribes (355). For example, differences among Alaska Native tribes can be as great as between Native and non-Natives. The Oklahoma City region serves members of more than 60 tribes who were originally from different areas of the North American continent but who were induced or forced to resettle in the Oklahoma area.

Thus, there is a long-recognized need for enhanced cultural awareness and training among health care providers of all kinds. The draft IHS MHPB National Plan recommended that:

> A more systematic program for orienting new mental health providers and for upgrading the skills of mental health staff and of other human service providers regarding mental health care and relevant cultural issues should be developed and implemented. New mental health staff should be fully oriented to the mental health program and to the cultural traditions and community of the tribe/tribes which are served. Such orientation should emphasize that Native Americans often fail to accept or respond to western mental health treatment procedures because of inherent socio-cultural factors, and that these factors must be taken into account and integrated into planning treatment strategies at all levels (355).

COMMUNITY INVOLVEMENT

Throughout the Nation and abroad, consumers are becoming increasingly involved in planning mental health services (19), and providers of services for young people are beginning to seek their continuing assistance. Not only is community involvement consonant with the spirit of Indian Self-Determination (Public Law 93-638 as amended), but it can enhance the feelings of self-efficacy and control that may be important to improved mental health (e.g., 18a).

Specific to Indian adolescents, the Laguna-Acoma Teen Center in rural New Mexico was developed with community participation (73). Teenagers themselves were involved in the planning and design of the Center, and continue to serve as an ongoing Teen Advisory Group, consulting with the adult program directors. The teens also prepare a peer-targeted, teen health-oriented newsletter, produce videotapes and skits, help teach fellow students and elementary school children, and are involved in evaluating the Center's programs. As part of the United National Indian Tribal Youth (UNITY) organization, Indian youth have been involved in needs assessments and have provided testimony to Congress on their views of the needs of Indian adolescents. One of the most pressing concerns identified by UNITY members at a May 1987 UNITY Conference was to improve communication between themselves and tribal government officials (306).[18]

Recognizing the importance of youth involvement, IHS and BIA are developing a plan to promote the involvement of youth in community actions involving alcohol and substance abuse, including encouraging the selection of youth as members of Tribal Coordinating Committees (361). It is important to note, however, that mental health treatment is a health care specialty like any other. In addition, Indian communities are unusual in that it they may be host to two mental health approaches: western-oriented psychotherapy and traditional medicine. Thus, conflicts concerning approaches to treatment among mainstream mental health professionals, traditional medicine specialists, and communities may be inevitable (19).

HOLDING THE SYSTEM TOGETHER

In planning a mental health system, it is not adequate simply to know the mental health needs of Indian people in a particular area and to be aware of available treatment and prevention. Treatment plans for patients often require that several interventions be used simultaneously. Patients need to be able to have access to services, or the services will not work.

Overview

In planning the development of a comprehensive mental health system, it is useful to consider the system as a continuous whole. Several types of deficiencies may exist. Test (308) described them as: a) "gaps" in the system—places where the components to meet some unmet need are inadequate or non-existent; b) "cracks" in the system—spaces between existing system elements resulting from a lack of communication, coordination, or clearly defined responsibilities; and c) difficulty in keeping the patient or client involved in the system.

All of these problems exist in the health care delivery systems in Indian communities, as Manson and Neligh (194) have noted. There are a variety of barriers to good care for the patient who must receive services from an array of different providers and agencies.

Bachrach (18) urged thinking of continuity of care as having several dimensions:

1. a temporal or longitudinal dimension that implies a course of treatment, unencumbered by the patient's having to put together discrete, unconnected episodes of service;
2. an individual dimension in which care is planned with and for the patient and his family;
3. a cross-sectional dimension consisting of comprehensiveness and continuity of care.
4. flexibility such that a patient is relieved of pressures to exhibit "progress" or to move "forward" along a continuum;
5. a relationship dimension in which contacts with the service system are, ideally, of a primary nature and are characterized by familiarity and closeness;
6. an accessibility dimension that ensures one the ability to reach the service system when needed; and
7. a communication dimension such that different agencies and individuals may be responsible for a patient's helpers.

McArthur (210) and Albaugh (7) provide concrete, practical examples of how these dimensions can be incorporated into local programming of services for Indian adolescents and their families.

Coordination Efforts Among Indian-Serving Agencies

Recently, IHS and other agencies in the U.S. Department of Health and Human Services have begun to address the issue of inter-and intra-agency coordination. These efforts primarily address the problem of alcohol and substance abuse among Indian people, including adolescents, and were stimulated by Public Law 99-570. Among these coordinating efforts are a U.S. DHHS Inter-Agency Task Force consisting of IHS, Office of Human Development Services, the Administration on Aging, the Alcohol, Drug Abuse and Mental Health Administration, and the Office of Minority Health (349). Memoranda of agreement (MoAs) have been signed between the IHS, these agencies, and others (i.e., Administration for Native Americans, Administration for Children Youth and Families) resulting in coordinated Discretionary Grant Programs to provide support to Indian communities which face alcohol and substance abuse problems. In addition, BIA and IHS have signed MoAs on child protection and alcohol and substance abuse (356,357). As a result of the Child Protection MoA, IHS and BIA formed a National Oversight Committee for Child Protection; the Committee is attempting to work more closely with tribes, the FBI (222) and the Office for Victims of Crime on child abuse (51). The purpose of the alcohol and substance abuse MoA was to develop a management framework for implementation of the Indian Alcohol and Substance Abuse Prevention and Treatment Act of 1986 (Public Law 99-570) resulted in an OMAP (361). In response to longstanding concerns about lack of coordination, IHS MHPB and A/SAPB also signed an MoA dated October 31, 1988 (353).

---

[18] More than 300 Indian youth representing 53 tribes from 21 States participated in the UNITY conference, which was sponsored by Youth 2000, a joint U. S. Department of Health and Human Services and U. S. Department of Labor campaign. The Indian youth identified their most pressing needs as: 1) alcohol, drug, and other substance abuse; 2) suicide; 3) teenage pregnancy; 4) preservation of tribal culture and traditions; 5) communication between themselves and tribal government officials; 6) funding for higher education; 7) motivation and self-esteem; 8) school dropout; 9) lack of recreational facilities; and 10) unemployment.

CONCLUSIONS AND POLICY IMPLICATIONS

Very little systematic research has been conducted on the effectiveness of specific therapies with Indian adolescents. Where success has been noted in the literature, it often reflects the judgment of the clinician providing the treatment rather than the conclusion of an objective observer conducting rigorous research. This situation is true of much research on mental health services (144,323). Nonetheless, OTA and others have concluded that, overall, more is known about how to provide mental health treatment to children, including adolescents, than is generally put into practice (323). Thus, it is unfortunate that even in the Nation at large, children and adolescents represent an underserved population. Among Indians, the situation is more critical, with only 17 child and adolescent-trained mental health professionals in the IHS mental health system and extremely limited access to inpatient care, residential treatment centers for emotionally disturbed children, and the other forms of care that constitute a desirable continuum of care. Tribally run programs such as parent groups are available to adolescents but few are specifically designed to meet their special needs.

OTA concludes that approximately 160 to 200 mental health providers especially trained to treat children and adolescents are needed in IHS service areas. OTA was unable to calculate an increase for urban areas because the number of Indian children and adolescents in urban areas is unknown. However, a ratio of 4 to 5 mental health professionals per 10,000 children, including adolescents, seems warranted.

Appendix A

Earlier Evaluations of American Indian and Alaska Native Adolescents' Mental Health Needs and Services

Public concern for the mental health of American Indian and Alaska Native youth arose initially within the context of their education, dating to an often-quoted publication entitled *The Problem of Indian Administration,* more commonly known as the Meriam Report (223). The Meriam Report highlighted a number of serious school-related conditions that threatened Indian youth's physical and emotional well-being. Sweeping reforms were encouraged. For example, the Meriam Report recommended raising food and clothing allowances, introducing Indian culture into the curriculum, and increasing the number and qualifications of school personnel. It also urged the construction of local day schools to serve as community centers. The intent was to improve the educational environment and render it more relevant to the daily life experience of Indian youth, thereby enhancing their sense of "personal security" and, consequently, the authors presumed, their academic competence. Many of these reforms were pursued by John Collier during his tenure as Commissioner of Indian Affairs from 1933 to 1945. However, ensuing administrations presided over the reversal of most of these advances (305).

It was not until nearly a quarter of a century later, with the issuance of the Kennedy Report in 1969, that the public spotlight returned to these concerns, and therefore to the mental health of Indian youth (326). Congressional forces, tribal leadership, and professional opinion coincided. As a result, the Senate Special Subcommittee on Indian Education reached extraordinarily negative conclusions about the impact of Federal policy on Indian adolescents in boarding schools, citing a "dismal record of absenteeism, dropouts, negative self-image, low achievement, and, ultimately, academic failure . . ." (326). Its recommendations echoed many of those advanced by the Meriam Report, 40 years earlier. Slow, but definite progress became evident (305) as new attempts at educational enrichment were undertaken, embodied in subsequent initiatives such as the Office of Economic Opportunity Headstart, Title IV of the Indian Education Act, and the remolding of Johnson-O'Malley programs (305).

Though education, especially boarding schools, continued to serve as a major forum for the discussion of Indian children's mental health, other areas of concern began to emerge. Kane and Kane (156) pointed out that the IHS's[1] preoccupation with infectious diseases, though important, ignored the social and psychological welfare of Indian people, and youth in particular (156). The consequences of ignoring adolescents' social and psychological problems were thought to be far-reaching and included alienation, adjustment difficulties, child abuse and neglect, alcohol dependence and abuse, and suicide. IHS mental health programming had begun just shortly before, in 1965-66, with a small outpatient clinic on the Pine Ridge Reservation and the formation of the Office of Mental Health Programs.

Interest in mental health services soon spread to other IHS areas. Yet these efforts almost exclusively emphasized adult services, as demonstrated by Attneave and Beiser's system-wide evaluation in 1974 (16). In their evaluation, the authors concluded that "services to children tend to be sporadically dispersed throughout IHS mental health programs. In part the focus on this age group depends on the activities of other programs such as Maternal and Child Health within IHS and Headstart and Day Care outside of IHS."

Public attention to the mental health needs of and services for Indian youth reached its zenith between 1976 and 1978. It came about through the convergence of three separate but related lines of advocacy. One effort focused on child welfare services. In 1976, the Children's Bureau within the Office of Human Development published a major study by the Denver Research Institute entitled *Indian Child Welfare: A State-of-the-Field Study* (329). It, together with a similar volume issued by the Indian Family Defense Fund (53), documented the alarming rates at which Indian youth were removed from their homes and placed for either foster care or adoption with non-Indian families. Major mental health problems were believed to follow from this practice, attributed in large part to the subsequent disruption of the child's still-evolving social and cultural identity. The well-known and still controversial Indian Child Welfare Act (Public Law 95-608) resulted from these and related endeavors, giving rise to local Indian Children's Welfare programs that have played an important role in identifying and caring for troubled youth and their families.

Another effort continued earlier criticisms of the general state of Indian health care. The *Final Report* of the American Indian Policy Review Committee, delivered to Congress in 1977, opened with a broad condemnation of Federal and State policies regarding human services in Indian communities (321). Stating that the quality of Indian life ranked lowest by virtually any statistic, the

---

[1] In 1955, responsibility for Indian health was transferred from the U.S. Department of the Interior, Bureau of Indian Affairs (BIA), to the then U.S. Department of Health, Education, and Welfare (now DHHS), and the Indian Health Service (IHS) was formed.

Committee concluded that it was not surprising that so many Indian families had been devastated by social disintegration caused by mental illness and alcoholism.

The third effort sprang from the 1978 President's Commission on Mental Health. The Report of the Special Populations Subpanel on the Mental Health of American Indians and Alaska Natives (253) reaffirmed the findings of these previous reports and strongly endorsed their recommendations. In addition, it briefly highlighted the special mental health needs of handicapped youth, of juveniles in the criminal justice system, and of youth experiencing rapid sociocultural change. The subpanel called for the development of a wide array of child mental health services, including family-oriented resource centers to provide diagnostic assessments, counseling, and followup, foster care and adoption services, and youth group homes. Their report frequently repeated the need to coordinate across State, tribal, and agencies.

In response to these reports, the IHS outlined plans for a series of regional Indian Children's Programs that would render and/or coordinate a continuum of mental health care, ranging from basic screening efforts to intensive residential treatment. The first program began in 1979 at Albuquerque, New Mexico, and was founded on a then unique interagency agreement between the IHS and BIA. Unfortunately, effective advocacy for Indian child mental health services gradually dissipated in the face of a major economic recession and severe budget cuts of federally supported health and human services. The Albuquerque-based Indian Children's Program proved to be the only one of its kind ever funded. Eventually even it was dismantled, having been unable to shift to the national scope required for successful justification of continued support. However, before closing, the program conducted a review that determined that Indian "children with social and mental health problems are not well served" (342). This report, *Phoenix IHS Area Review: Perceptions of Service for Special Needs Children* (342), indicated that younger children in need of care are not identified appropriately and are the most difficult to link with appropriate services, that the urban Indian population is essentially unaware of available services for children, and that the youth of rural Indian families are least likely to receive specialty care. As the highest priority for future programs, the Indian Children's Program report stressed coordination among tribes, State, and Federal Government. The proposed mechanism involved teams involving multiple disciplines and agencies, with case management, a registry system, and an interagency resource directory.

Appendix B

Population Estimates for Estimating Suicide Death Rates

Official estimates of the IHS service population (those persons living on or near reservations or in urban settings where IHS has facilities) by age and gender are currently not available. Therefore population estimates used to calculate rates for this report should be considered as "unofficial."

Two methods for estimating the IHS adolescent service population were considered. The first method, which was used for this report, uses the following calculations:

- The age and sex distribution for adolescents from the 1980 census data on the reservation states population was applied to the 1980 estimated service population (those living on or near reservations) to obtain a count of 10-14 and 15-19 year olds. (No count of the actual 1980 service population is available.)
- Five year age cohorts for the ages 5-9 (to be used for step #3), 10- 14, and 15-19 were calculated for males and females using the age and gender distribution for reservation states in 1980. Each five year cohort was divided by five to obtain single year age estimates. Also, for step #3, estimates of 4 year old males and females were calculated for 1980.
- For the years 1981 through 1986, the population was "aged" forward by one year. Thus, 10 year olds in 1980 became 11 year olds in 1981 and so forth. Since mortality data for the IHS service population is available by single year of age and gender, deaths occurring in each single year age group were subtracted.

An alternative method would have been to calculate population estimates using the 1980 reservation states age and gender distribution and apply it against the total IHS service population estimates developed for the IHS chart series (355a). These estimates show that the overall IHS population is increasing by approximately 2 percent per year. However, using this technique would also imply that all age groups are growing at an even rate when, in fact, this is not the case. The increase in the IHS service population is occurring primarily through increased births and decreased deaths in the older age cohorts. If this method for calculating the adolescent population were used in computing either age-specific death or fertility rates, those data would show artificially sharp declines (due to increases in population versus a decrease in the absolute number of events) in comparison to other adolescent populations.

Tables B-1 and B-2 show a comparison of the results for the two population estimation methods.

Table B-1—IHS Service Area Population Estimates Using Method #1

	1980	1981	1982	1983	1984	1985	1986
Females:							
10-14	45,665	45,150	44,637	44,134	43,633	43,167	43,305
15-19	49,725	48,864	48,012	47,169	46,340	45,522	45,017
Total	95,390	94,014	92,649	91,303	89,973	88,689	88,322
Males:							
10-14	47,155	46,511	45,862	45,226	44,575	43,949	44,174
15-19	50,535	49,728	48,962	48,233	47,555	46,969	46,310
Total	97,690	96,239	94,824	93,459	92,130	90,918	90,484

SOURCE: Office of Technology Assessment, 1990.

Table B-2—IHS Service Area Population Estimates Using Method #2

	1980	1981	1982	1983	1984	1985	1986
Females:							
10-14	45,665	46,810	48,013	49,790	51,708	53,107	54,518
15-19	49,725	50,972	52,282	54,217	56,306	57,828	59,365
Total	95,390	97,288	100,295	100,407	108,014	110,935	113,883
Males							
10-14	47,007	48,186	49,424	51,253	53,228	54,668	56,120
15-19	50,537	51,804	53,135	55,102	57,225	58,773	60,334
Total	97,554	99,990	102,559	106,355	110,453	113,441	116,454

SOURCE: Office of Technology Assessment, 1990.

Appendix C

Overview of Indian Health Service

The U.S. Department of Health and Human Services (U.S. DHHS), primarily through the Indian Health Service (IHS) of the Public Health Service (PHS), is responsible for providing Federal health services to American Indians and Alaska Natives. Federal Indian health services are based on the laws which the Congress has passed pursuant to its authority to regulate commerce with the Indian Nations as explicitly specified in the Constitution and in other pertinent authorities.[1] The goal of the IHS program is to raise the health status of American Indians and Alaska Natives to the highest possible level (Indian Health Care Improvement Act [Public Law 94-437 as amended]). IHS defines its service delivery responsibilities to include a comprehensive range of inpatient and ambulatory medical services, dental care, mental health and alcoholism services, preventive health (immunizations and environmental services such as sanitation and water safety), health education, and Indian health staff development programs (322).

IHS provides these health and health-related services to eligible Indians in a variety of ways. The approximately 1 million Indians[2] (355a) who live on or near reservations are theoretically eligible to receive the comprehensive range of services at no cost to the individual Indian, regardless of other health insurance coverage or ability to pay. This program of services is provided in facilities owned and operated by IHS, and is known as the *direct care program.*

Although in principle IHS services are comprehensive and readily available at no user cost, in fact they are limited by IHS budget constraints and by the uneven distribution of services among IHS areas that has developed over the years (322). When no IHS facility is accessible or when specific services are not available from IHS facilities, Indian patients may require referral to private providers under the IHS *contract care program.* It is important to note that contract care is a separate item in the overall IHS budget, and that contract care budgets sometimes have been so limited that needed referrals cannot be made. Thus, while they may not be directly affected by ability to pay, Indians may face serious obstacles in obtaining health care services through IHS. Another obstacle to obtaining contract care is that eligibility for such services is more restricted than for direct care.

Another factor in the IHS delivery system since the Indian Self-Determination and Education Assistance Act of 1975 (Public Law 93-638), amended in 1988 (Public Law 100-472), has been the operation of health facilities and service programs by Indian tribes. Direct care facilities, contract care programs, facilities construction, and special programs such as community health representatives, mental health and drug abuse, and health education initiatives may be administered by tribes under *self-determination* or 638 contracts. Most of these services, like IHS's own services, are reservation based, and they are provided to IHS-eligible Indians at no cost to the individual. But Indian tribes may also use non-Federal sources of payment, and may treat non-Indians (322).

About half of Indians today reside in urban areas rather than on reservations.[3] However, *urban Indian health projects* operate separately from the reservation-based IHS system. Unlike IHS-direct programs, urban projects may receive funds from non-IHS sources, are likely to treat non-Indians, and may request payment from Indians and non-Indians alike based on a sliding fee scale. Urban projects are similar to tribally operated programs in that they are more active than IHS programs in treating and billing non-Indians and in coordinating their efforts with other non-IHS health delivery programs (322). Primarily, urban programs must be more active in securing other funds because IHS only partially supports urban programs.

Although IHS programs provide health, dental, mental health, alcoholism, and preventive health services, most of IHS's resources are, apparently of necessity, used to provide hospital-based and ambulatory services for acute and chronic physical conditions. As shown in table C-1, for example, $723 million (77 percent) of IHS's total fiscal year 1988 budget of $935 million was used for hospitals and clinics, exclusive of dental, mental health, and alcoholism services. Another 9 percent of the budget was used for direct clinical dental, mental health, and alcoholism treatment services: 3 percent for direct and tribal dental services, 1.3 percent for direct and tribal mental health services, and 3.1 percent to direct and tribal alcoholism services. Of the clinical budget, $183 million

---

[1] Social and health services have been provided to Indian tribes since the time the United States became an independent nation. Until 1921, when the Snyder Act (42 Stat. 208; 25 U.S.C. section 13) was passed, Congress provided funds without specific authorization. Since 1921, the Snyder Act has been the basic authorizing mechanism to provide funds for Indian health services (322). However, while Congress has consistently provided funds for Indian service programs, the courts so far have ruled that these benefits are voluntarily provided by Congress and not mandated under the Federal Government's trust responsibility for Indian tribes. Appropriated funds are "public moneys" and not treaty or tribal funds "belonging really to the Indians" (*Scholder* v. *United States*, 428 F. 2d 1123 [9th Cir., 1970], *cert. denied*, 400 U.S. 942 [1970].

[2] The exact number of Indians in the service population is not known with certainty (322).

[3] Historical reasons for this are discusssed in U.S. Congress, OTA (322).

Table C-1—IHS Allocations by Budget Category, Fiscal Year 1988

Activity/subactivity	Total area allocations	Percent of total
Clinical services:		
Hospital and clinics	$533,614,000	57%
Dental	28,974,000	3
Mental health	12,466,000	1
Alcoholism	29,335,000	3
Maintenance and repair	11,359,000	1
Reimbursements	6,227,370	—
Total health care delivery	$621,975,370	66%
Contract care	183,481,000	19
Total clinical services	$805,456,370	86%
Preventive health:		
Sanitation	$23,907,000	3
Public health nursing	14,113,000	2
Health education	4,413,000	—
Community health reps	27,282,000	3
Immunization	395,000	—
Total preventive health	$70,110,000	7%
Urban projects	9,624,000	1
Indian health manpower	7,646,000	1
Tribal management	3,094,000	—
Direct operations	39,104,000	4
Total allowances issued	$925,034,000	100%

[a] Less than 1 percent of total.

SOURCE: U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, "Fiscal Year 1990 Justification of Appropriation Estimates for Committee on Appropriations, Volume XI—Indian Health" (Washington, DC: U.S. Department of Health and Human Services, Public Health Service, 1989).

(25 percent of the clinical budget) was used to provide contract care services.[4]

Seven percent of IHS's budget was used for preventive health services (i.e., sanitation, public health nursing, health education, community health representatives, and immunizations) in fiscal year 1988. Of IHS's total budget, $9.6 million (1.2 percent) was allocated to 35 urban projects. Although it is not shown separately in table C-1, approximately $218 million was used to support Indian self-determination (638) grants and contracts in fiscal year 1988.

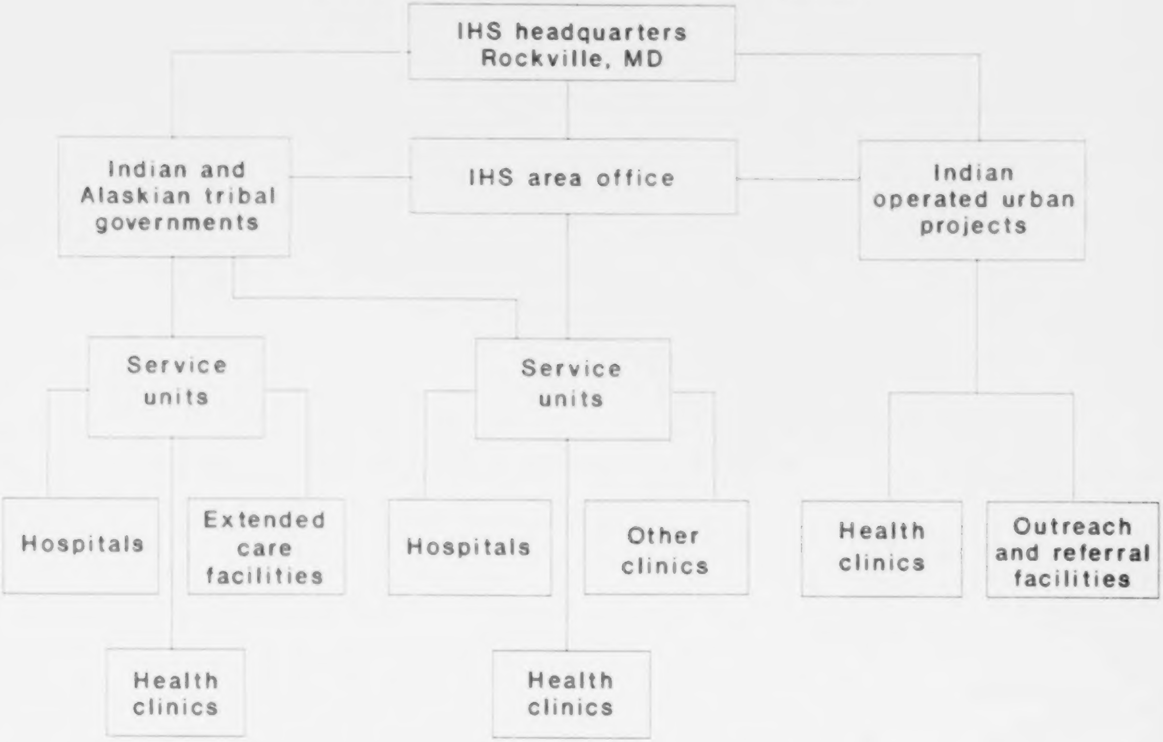
Organizationally, IHS comprises 12 regional administrative units called Area Offices (see figure C-1).[5] Currently, the Area Offices oversee 127 basic administrative units called Service Units. Of the 127 service units, 52 are operated by tribes (see figure C-2). IHS operates 43 hospitals, 131 health centers and stations, and 37 other treatment locations (figure C-3), while tribes operate 7 hospitals, 313 health centers and stations, and 11 other treatment locations (figure C-2) (355a). Thirty-five urban health projects are partially supported by IHS (figure C-4). With the partial exception of the urban projects, IHS facilities are concentrated in the Western part of the Nation, where most reservation-based Indians live (figure C-5).

---

[4] Some contract care funds are used for dental, mental health, and alcoholism services.

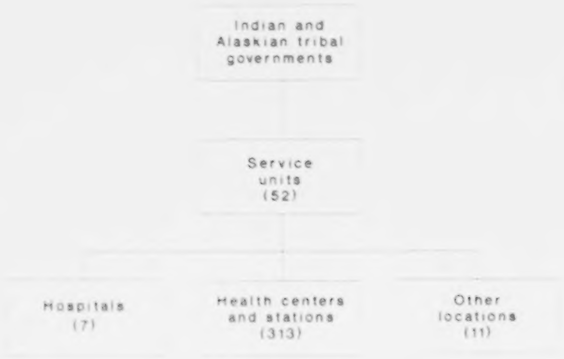
[5] Technically, the IHS office in Tucson is a headquarters office for the Office of Health Program Development, which is responsible for administering health services delivery. For statistical purposes, IHS considers Tucson an Area Office.

Figure C-1—Organization of the Indian Health Service


IHS headquarters Rockville, MD
Indian and Alaskian tribal governments
IHS area office
Indian operated urban projects
Service units
Service units
Hospitals
Extended care facilities
Hospitals
Other clinics
Health clinics
Outreach and referral facilities
Health clinics
Health clinics

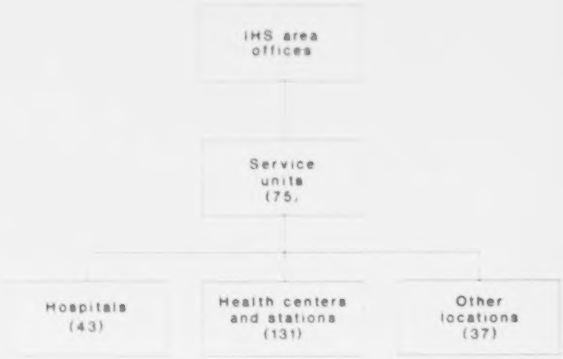
SOURCE: U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, Office of Planning, Evaluation and Legislation, Division of Program Statistics, *Trends in Indian Health, 1989* (Rockville, MD: 1989).

Figure C-2—Health Services Managed by Indian and Alaskan Tribal Governments


Indian and Alaskian tribal governments
Service units (52)
Hospitals (7)
Health centers and stations (313)
Other locations (11)

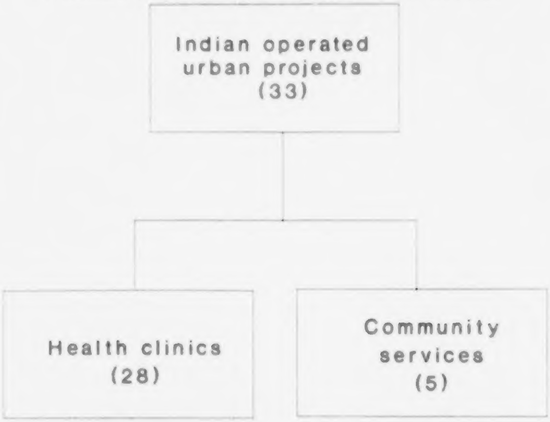
SOURCE: U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, Office of Planning, Evaluation and Legislation, Division of Program S1tatistics, *Trends in Indian Health, 1989* (Rockville, MD: 1989).

Figure C-3—Service Units, Hospitals, Health Centers and Stations, and Other Treatment Services Operated by Indian Health Service Area Offices


IHS area offices
Service units (75)
Hospitals (43)
Health centers and stations (131)
Other locations (37)

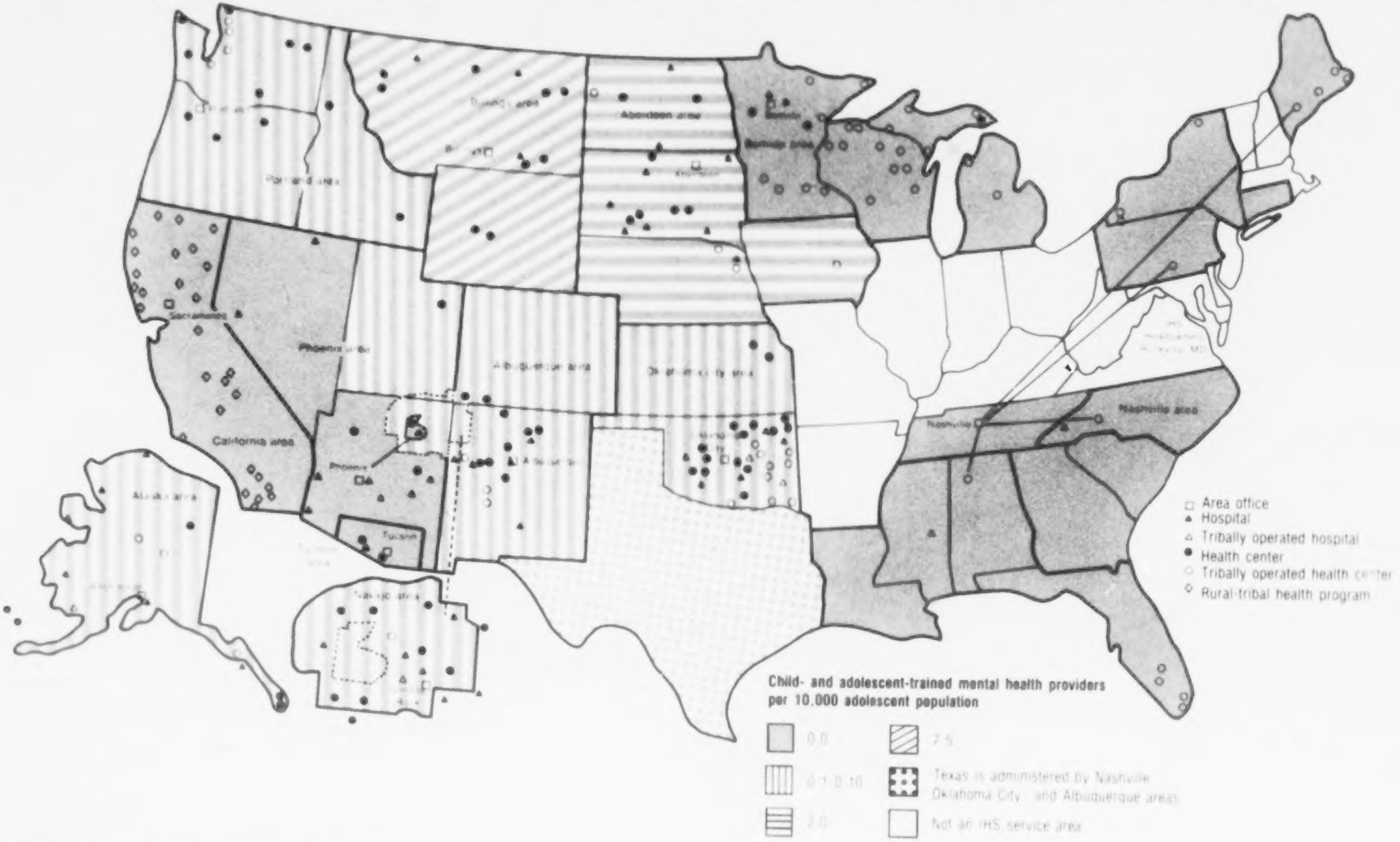
SOURCE: U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, Office of Planning, Evaluation and Legislation, Division of Program Statistics, *Trends in Indian Health, 1989* (Rockville, MD: 1989).

Figure C-4—Indian-Operated Urban Projects Partially Supported by Indian Health Service


Indian operated urban projects (33)
Health clinics (28)
Community services (5)

SOURCE: U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, Office of Planning, Evaluation and Legislation, Division of Program Statistics, *Trends in Indian Health, 1989* (Rockville, MD: 1989).

Figure C-5—Child- and Adolescent-Trained Mental Health Care Providers for Indian Adolescents by IHS Service Area


Portland area
Billings area
Billings
Aberdeen area
Aberdeen
Bemidji
Bemidji area
Sacramento
California area
Phoenix area
Phoenix
Tucson
Albuquerque area
Albuquerque
Oklahoma City area
Alaska area
Anchorage
Navajo area
Nashville area
Nashville
IHS Headquarters Rockville, MD
□ Area office
▲ Hospital
△ Tribally operated hospital
● Health center
○ Tribally operated health center
◇ Rural-tribal health program
Child- and adolescent-trained mental health providers per 10,000 adolescent population
0.0
0.1-0.10
2.0
7.5
Texas is administered by Nashville, Oklahoma City, and Albuquerque areas
Not an IHS service area

SOURCE: Office of Technology Assessment, 1990.

Appendix D

Acknowledgments

Lynn Ackerson
National Center for American Indian and Alaska Native Mental Health Research
Denver, CO

Michael Arfstan
American Indian Health Care Association
St. Paul, MN

Katherine Armstrong
U.S. Department of Health and Human Services
Office of Disease Prevention and Health Promotion
Washington, DC

Fred Beauvais
Colorado State University
Fort Collins, CO

Donald Bechtold
University of Colorado Health Sciences Center
Denver, CO

George Breneman
Indian Health Service
Rockville, MD

Thomas Burns
Indian Health Service
Rockville, MD

Phyllis Old Dog Cross
U.S. Public Health Service
Rapid City, SD

Terry L. Cross
Northwest Indian Child Welfare Institute
Portland, OR

Sally Davis
Center for Indian Youth Program Development
University of New Mexico
Albuquerque, NM

Dennis P. DeGross
Alaska Native Health Board
Anchorage, AK

Rhonda Dick
National Center for American Indian and Alaska Native Mental Health Research
Denver, CO

Christine DuClos
National Center for American Indian and Alaska Native Mental Health Research
Denver, CO

Aaron Handler
Indian Health Service
Rockville, MD

Kathleen Hedrick
National Center for American Indian and Alaska Native Mental Health Research
Denver, CO

Al Hiat
Indian Health Service
Albuquerque, NM

Ken Hunt
Center for Indian Youth Program Development
University of New Mexico
Albuquerque, NM

Emery A. Johnson
Rockville, MD

Steve Kaufman
Indian Health Service
Rockville, MD

Judy Kuntze
National Center for American Indian and Alaska Native Mental Health Research
Denver, CO

Jerry M. Lyle
Indian Health Service
Rockville, MD

Russell Mason
Indian Health Service
Rockville, MD

Ron Meeks
Indian Health Service
Rockville, MD

Gordon Neligh
University of Colorado
Department of Psychiatry
Denver, CO

Scott Nelson
Indian Health Service
Albuquerque, NM

John O'Connor
National Indian Health Board
Denver, CO

Judy Palier
National Center for American Indian and Alaska Native Mental Health Research
Denver, CO

Delores Parron
National Institute of Mental Health
Rockville, MD

Lillian Rendon
National Center for American Indian and Alaska Native Mental Health Research
Denver, CO

Rock R. Richardson
Oklahoma Department of Mental Health
Oklahoma City, OK

Gayle Riddles
Indian Health Service
Rockville, MD

William H. Sack
The Oregon Health Sciences University
Portland, OR

Sherry Saddler
Indian Health Service Flathead Service Unit
St. Ignatius, MT

Sheppard Salusky
Seattle Indian Health Board
Seattle, WA

Valerie Shangreaux
Indian Center, Inc.
Lincoln, NE

David E. Simmons
Northwest Indian Child Welfare Association
Portland, OR

Andrea Solarz
Carnegie Corporation of New York
Office of Technology Assessment

Maria E. Stetter
Indian Health Service
Albuquerque, NM

James W. Thompson
The University of Maryland
Baltimore, MD

Susan Thornton
National Center for American Indin and Alaska Native Mental Health Research
Denver, CO

Joseph Trimble
Western Washington University
Bellingham, WA

Lillian Vigil
National Center for American Indian and Alaska Native Mental Health Research
Denver, CO

Eddie Wadda
Youth Council/UNITY
Wind River Reservation
Fort Washakie, WY

Diane J. Willis
University of Oklahoma
Oklahoma City, OK

References

1. Abdel-Mawgood, M.E., and Hatch, G., *The Self-Concepts of Academic Ability Among American Indian Students: A Research Report* (Ellensburg, WA: Central Washington State College, 1972).
2. Abelson, H.I., Fishburne, P.M., and Cisin, I., *National Survey on Drug Abuse: 1977* (Princeton, NJ: Response Analysis, 1977).
3. Ackerson, L.M., Dick, R.W., Manson, S.M., et al., "Depression Among American Indian Adolescents: Psychometric Characteristics of the Inventory to Diagnose Depression," *Journal of the American Academy of Child and Adolescent Psychiatry* (in press).
4. Adams, M.S., and Niswander, J.D., "Birth Weight of North American Indians," *Human Biology* 40(3):226-234, 1968.
5. Alaska Native Health Board, "Evaluation of Alcoholism Treatment Services in the State of Alaska," report no. E-38, final report prepared for the Indian Health Service, Health Resources and Services Administration, Public Health Service, U.S. Department of Health and Human Services, Rockville, MD, 1973.
6. Alaska Native Health Board, "Adolescent Alcoholism: A Relationship to Other Mental Health Problems," report no. E-39, final report prepared for the Indian Health Service, Health Resources and Services Administration, Public Health Service, U.S. Department of Health and Human Services, Rockville, MD, 1976.
7. Albaugh, B.J., "Integrated Family Services Association: Networking Services for the High Risk Family," in the proceedings of "Encircling Our Forgotten," Oklahoma City, OK, June 1-2, 1988.
8. Albaugh, B.J., and Albaugh, P., "Alcoholism and Substance Sniffing Among the Cheyenne and Arapaho Indians of Oklahoma," *International Journal of the Addictions* 4(7):1001-1007, 1979.
9. American Alliance for Health, Physical Education, Recreation and Dance, American School Health Association, Association for the Advancement of Health Education, and Society for Public Health Education, "National Adolescent Student Health Survey," preliminary results, August 9, 1988.
10. American Humane Association, *Highlights of Official Child Neglect and Abuse Reporting: 1985* (Denver, CO: 1987).
11. American Indian Health Care Association, "Mental Health Services Delivery: Urban Indian Health Programs," St Paul, MN, 1988.
12. American Psychiatric Association, *Diagnostic and Statistical Manual for Mental Disorders, Version Three (Revised)* (Washington, DC: 1987).
13. Ashby, M.R., Gilchrist, L.D., and Miramontez, A., "Group Treatment for Sexually Abused American Indian Adolescents," *Social Work with Groups* 10(4):21-32, 1988.
14. Attneave, C.L., "Therapy in Tribal Settings and Urban Network Intervention," *Family Process* 8(2):192-210, 1969.
15. Attneave, C.L., "American Indian and Alaska Native Families: Emigrants in Their Own Homeland," *Ethnicity and Family Therapy*, M. McGoldrich, J.K. Pearce, and J. Giordano (eds.) (New York, NY: Guilford Press, 1982).
16. Attneave, C.L., and Beiser, M., "Service Networks and Patterns of Utilization, Mental Health Programs, Indian Health Service," contract no. 110-73-342, unpublished report submitted to the Indian Health Service, Health Resources and Services Administration, Public Health Service, U.S. Department of Health and Human Services, Rockville, MD, 1974.
17. Avery, A.D., Lelak, T., and Solomo, N., "Quality of Medical Care Assessment Using Outcome Measures: Eight Disease Specific Applications," R-2021/2-HEW, prepared by the Rand Corp., Santa Monica, CA, for U.S. Department of Health, Education, and Welfare, Washington, DC, 1976.
18. Bachrach, L.L., "Continuity of Care for Chronic Mental Patients: A Conceptual Analysis," *American Journal of Psychiatry* 138(11):1449-1456, 1981.

18a. Bandura, A., *Social Foundations of Thought and Action* (Englewood Cliffs, NJ: Prentice-Hall, 1986).

19. Barker, I., and Peck, E., "Thinking It Through: Theoretical Perspectives," *Power in Strange Places: User Empowerment in Mental Health Services*, I. Barker and E. Peck (eds.) (London, England: Good Practices in Mental Health, September 1987).
20. Bass, W., *The American Indian High School Dropouts in the Southwest* (Albuquerque, NM: Southwestern Cooperative Educational Laboratory, Inc., 1969).
21. Beauvais, F., and Laboueff, S., "Drug and Alcohol Abuse Intervention in American Indian Communities," *The International Journal of the Addictions* 20(1):139-171, 1985.
22. Beauvais, F., and Oetting, E.R., "High Rate of Drug Use Among Native American Youth," *NIDA Notes* 2(2):14, 1987.
23. Beauvais, F., Oetting, E.R., and Edwards, R.W., "Trends in Drug Use of Indian Adolescents Living on Reservations: 1975-1983," *American Journal of Drug and Alcohol Abuse* 11(4):209-229, 1985.
24. Beauvais, F., Oetting, E.R., and Edwards, R.W., "Trends in the Use of Inhalants Among American Indian Adolescents," *White Cloud Journal* 3(4):3-11, 1985.

25. Beauvais, F., Oetting, E.R., Wolf, W., et al., "American Indian Youth and Drugs, 1976-87: A Continuing Problem," *American Journal of Public Health* 79(5):634-636, 1989.
26. Bechtold, D.W., "Cluster Suicide in American Indian Adolescents," *American Indian and Alaska Native Mental Health Research* 1(3):26-35, 1988.
27. Beiser, M., "Hazard to Mental Health: Indian Boarding Schools," *American Journal of Psychiatry* 131(3):305-306, 1974.
28. Beiser, M., "Mental Health of American Indian and Alaska Native Children: Some Epidemiological Characteristics," *White Cloud Journal* 2(2):37-47, 1981.
29. Beiser, M., and Attneave, C.L., "Mental Disorders Among Native American Children: Rate and Risk Periods for Entering Treatment," *American Journal of Psychiatry* 139(2):193-198, 1982.
30. Beiser, M., and Manson, S.M., "Prevention of Emotional Disorders in Native North American Children," *Journal of Preventive Psychiatry* 3(3):225-240, 1987.
31. Benjamin, E.F., "An Investigation of the Self-Concept of Alaskan Eskimo Adolescents in Four Secondary School Environments," unpublished Ph.D. dissertation, Oregon State University, 1973.
32. Bennet, F.C., Ruuska, S.H., and Sherman, R., "Middle Ear Function in Learning-Disabled Children," *Pediatrics* 66(2):253-260, 1980.
33. Berlin, I.N., Chair, NIMH American Indian Task Force, School of Medicine, University of Mexico, Albuquerque, NM, "Development of a Curriculum on American Indians and Native Alaskans," undated.
34. Berlin, I.N., "Mental Health Consultation to Child Serving Agencies: A Therapeutic Intervention," *Basic Handbook of Child Psychology*, J. Noshpitz and S.H. Harrison (eds.) (New York, NY: Basic Books, 1979).
35. Berlin, I.N., "Prevention of Emotional Problems Among Native American Children: Overview of Developmental Issues," *Journal of Preventive Psychiatry* 1(3):319-330, 1982.
36. Berlin, I.N., "Prevention of Adolescent Suicide Among Some Native American Tribes," *Adolescent Psychiatry: Developmental and Clinical Studies*, S.C. Feinstein (ed.) (Chicago, IL: University of Chicago Press, 1985).
37. Berlin, I.N., "Psychopathology and Its Antecedents Among American Indian Adolescents," *Advances in Clinical Child Psychology* 9(2):125-152, 1986.
38. Berlin, I.N., "Suicide Among American Indian Adolescents: An Overview," *Suicide and Life-Threatening Behavior* 17(3):218-232, 1987.
39. Beuke, V.L., "The Relationship of Cultural Identification to Personal Adjustment of American Indian Children in Segregated and Integrated Schools," unpublished Ph.D. dissertation, Cornell University, 1978.
40. Black, R., and Mayer, J., "Parents With Special Problems," *The Battered Child*, C.H. Kempe and R.E. Helfer (eds.) (Chicago, IL: University of Chicago Press, 1980).
41. Bloom, B.L., "Prevention of Mental Disorders: Recent Advances in Theory and Practice," *Community Mental Health Journal* 15(3):179-191, 1979.
42. Bloom, B.L., "Focal Issues in the Prevention of Mental Disorders," *Preventing Stress-Related Psychiatric Disorders*, H.H. Goldman and S.E. Goldston (eds.), DHHS Pub. No. (ADM) 85-1366 (Washington, DC: U.S. Government Printing Office, 1985).
43. Blum, R., "Physicians' Assessments of Deficiencies and Desire for Training in Adolescent Medicine," *Journal of Medical Education* 62(5):401-407, 1987.
44. Bonnie, R.J., "Discouraging Unhealthy Personal Choices: Reflections on New Directions in Substance Abuse Policy," *Journal of Drug Issues* 8(3):199-219, 1978.
45. Boyer, L.B., "Psychoanalytic Insight in Working With Ethnic Minorities," *Social Casework* 45(4):519-526, 1964.
46. Brockman, C.T., "Social Class and Educational Level of the Flathead Reservation," *Journal of American Indian Education* 10(1):23-31, 1970.
47. Brown, E.F., "A Comparative Study of Alaskan Native Adolescent and Young Adult Secondary School Dropouts," *A Perspective of the Alaskan Native School Dropout*, B.E. Oviatt (ed.), ERIC document reproduction service no. ED 116876 (Salt Lake City, UT: Social Service Resource Center of Utah, 1973).
48. Browne, A., and Finkelhor, D., "Impact of Child Sexual Abuse: A Review of the Research," *Psychological Bulletin* 99(1):66-77, 1986.
49. Bryde, J.F., "The Sioux Indian Student: A Study of Scholastic Failure and Personality Conflict," Cumulative Reports in Education, ERIC document reproduction service no. ED 018289, Pine Ridge, SD, 1967.
50. Bryde, J.F., *Indian Students and Guidance* (Boston, MA: Houghton, Mifflin, Co., 1971).
51. Burnley, J.N., Director, Office for Victims of Crime, Office of Justice Programs, U.S. Department of Justice, "Statement," before the Select Committee on Indian Affairs, Special Committee on Investigations, Senate, U.S. Congress, "Investigative Hearing on the Federal Government's

Relationship with American Indians," February 22, 1989.

52. Burns, T.R., and McCoy, G., "Analysis of Responses to the Alcohol-Mental Health Survey," unpublished report prepared for Indian Health Service, Public Health Service, U.S. Department of Health and Human Services, Rockville, MD, July 21, 1989.
53. Byler, W., "The Destruction of American Indian Families," *The Destruction of the American Indian Family*, S. Unger (ed.) (New York, NY: The Association on American Indian Affairs, 1977).
54. Campbell, M., and Spencer, E.S., "Psychopharmacology in Child and Adolescent Psychiatry: A Review of the Past Five Years," *Journal of the American Academy of Child and Adolescent Psychiatry* 27(3):269-279, 1988.
55. Caplan, G., *Principles of Preventive Psychiatry* (New York, NY: Basic Books, 1964).
56. Carmen, E., Rieker, P., and Mills, T., "Victims of Violence and Psychiatric Illness," *American Journal of Psychiatry* 141(3):378-383, 1984.
57. Charleston, G.M., Meyers, J.G., and Charleston, K., "Indian Alcoholism Program Evaluation, Fiscal Year 1984, National Report," report prepared for the Indian Health Service, Health Resources and Services Administration, Public Health Service, U.S. Department of Health and Human Services, Rockville, MD, 1985.
58. Cockerham, W.C., Forslund, M.A., and Raboin, R.M., "Drug Use Among White and American Indian High School Youth," *International Journal of the Addictions* 11(2):209-220, 1976.
59. Cohen, D.L., "New Jersey Project: Help Close at Hand," *Education Week* 9, 12, March 15, 1989.
60. Cohen, F., and Densen-Gerber, J., "A Study of the Relationship Between Child Abuse and Drug Addiction in 178 Patients: Preliminary Results," *Child Abuse and Neglect* 6:383-387, 1982.
61. Coleman, L., "Teen Suicide Clusters and the Werther Effect," *The Network News* 3(1):1-6, 1986.
62. Confederated Salish and Kootenai Tribes of the Flathead Reservation, "Testimony of the Confederated Salish and Kootenai Tribes of the Flathead Reservation on S. 1270, Legislation Establishing an Indian Mental Health Demonstration Grant Program," presented to the Select Committee on Indian Affairs, Senate, U.S. Congress, September 14, 1989.
63. Coombs, M.L., *BIA Educational Countdown* (Washington, DC: U.S. Government Printing Office, 1959).
64. Cooper, J.G., "Perception of Self and Others as a Function of Ethnic Group Membership," unpublished Ph.D. dissertation, University of New Mexico, Albuquerque, NM, 1971.
65. Corrigan, F.V., "A Comparison of Self-Concepts of American Indian Students From Public or Federal School Backgrounds," unpublished Ph.D. dissertation, George Washington University, 1970.
66. Corwin, S., "URRD Needs Assessment Report, No. 78-4," unpublished program report, ERIC document reproduction service no. ED 209382 (Seattle, WA: Seattle Public School Department of Management Information Services, 1978).
67. Crosby, M., Assistant Director for Governmental Affairs, American Academy of Child and Adolescent Psychiatry, Washington, DC, personal communication, November 14, 1989.
68. Cross, T.L., Bazron, B.J., Dennis, K.W., et al., *Towards a Culturally Competent System of Care: A Monograph on Effective Services for Minority Children Who Are Severely Emotionally Disturbed* (Washington, DC: Child and Adolescent Service System Program (CASSP) Technical Assistance Center, Georgetown University Child Development Center, March 1989).
69. Dahaene, P., Crepin, G., Delahousse, G., et al., "Aspect Epidemiologiques du Syndrome d'Alcoholisme Foetal," *La Vouvelle Presse Medicale* 10(32): 2639-2643, 1981.
70. Dankworth, R.T., "Educational Achievement of Indian Students in Public Secondary Schools as Related to Eight Variables, Including Residential Environment," unpublished Ph.D. dissertation, Utah State University, 1970.
71. David, B.R., and Hardy, R.J., "A Suicide Epidemic Model," *Social Biology* 33(3-4):291-300, 1986.
72. Davids, D.W., "An Analysis of the State Department of Public Instruction Reports to the Federal Government Relative to Wisconsin Indian High School Dropouts," paper presented at the Graduate School, University of Wisconsin, Milwaukee, WI, ERIC document reproduction service no. ED 070537, 1963.
73. Davis, S.M., Hunt, K., and Kitzes, J.M., "Improving the Health of Indian Teenagers—A Demonstration Program in Rural New Mexico," *Public Health Reports* 104(3):271-278, 1989.
74. DeBruyn, L.M., Hymbaugh, K., and Valdez, N., "Helping Communities Address Suicide and Violence: The Special Initiatives Team of the Indian Health Service," *American Indian and Alaska Native Mental Health Research* 1(3):56-65, 1988.
75. Denver Indian Health and Family Services, Inc., "Survey of Mental Health Services in Greater Denver," unpublished program report, Denver, CO, 1989.

76. Development Associates, "Final Report: The Evaluation of the Impact of the Part A Entitlement Program Funded Under Title IV of the Indian Education Act," Arlington, VA, 1983.

77. Devereux, G., *Reality and Dreams: Psychotherapy of a Plains Indian* (New York, NY: International Universities Press, 1950).

78. Devereux, G., "Three Technical Problems in the Psychotherapy of Plains Indian Patients," *American Journal of Psychotherapy* 5:411-423, 1951.

79. Devereux, G., *Mohave Ethnopsychiatry* (Washington, DC: Smithsonian Institution Press, 1961).

80. Dinges, N.G., "Mental Health Promotion With Navajo Families," *New Directions in Prevention Among American Indian and Alaska Native Communities*, S.M. Manson (ed.) (Portland, OR: Oregon Health Sciences University, 1982).

81. Dinges, N.G., Trimble, J.E., Manson, S.M., et al., "Counseling and Psychotherapy With American Indians and Alaska Natives," *Cross-Cultural Counseling and Psychotherapy*, A.J. Marsella and P. Pederson (eds.) (New York, NY: Pergamon, 1981).

82. Dinges, N.G., Yazzie, M., and Tollefson, G.D., "Developmental Intervention for Navajo Family Mental Health," *Personnel and Guidance Journal* 52(6):390-395, 1974.

83. DiSarno, N.J., and Barringer, C., "Otitis Media and Academic Achievement in Eskimo High School Students," *Folia Phoniatrics* 39(5):250-255, 1987.

84. Dise-Lewis, J.E., "The Life Events and Coping Inventory: An Assessment of Stress in Children," *Psychosomatic Medicine* 50:484-499, 1988.

85. Dizmang, L.H., Watson, J., May, P.A., et al., "Suicide in the American Indian," *Psychiatric Annals* 4(9):22-28, 1974.

86. Dizmang, L.H., Watson, J., May, P.A., et al., "Adolescent Suicide at an Indian Reservation," *American Journal of Orthopsychiatry* 44(1):43-49, 1974.

87. Dougherty, D., Office of Technology Assessment, U.S. Congress, "Indian Health," testimony before the Special Committee on Investigations, Select Committee on Indian Affairs, Senate, U.S. Congress, May 15, 1989.

88. Douglas, B.G., Chief, Program Analysis and Research Branch, Indian Health Service, Public Health Service, U.S. Department of Health and Human Services, "Mental Health Research Agenda," memorandum to Scott H. Nelson, Chief, Mental Health Programs Branch, Indian Health Service, Public Health Service, U.S. Department of Health and Human Services, October 5, 1988.

89. Dreyer, P.H., "The Meaning and Validity of the 'Phenomenal Self' for American Indian Students," *National Study of American Indian Education Research Reports* 1(4):1-27, 1970.

90. Dryfoos, J.G., "School-Based Health Clinics: Three Years of Experience," *Family Planning Perspectives* 20(4):193-200, 1988.

91. Duran, E., *Archetypal Consultation: A Service Model for Native Americans* (New York, NY: Peter Lang, 1984).

92. Earls, F., Escobar, J.I., and Manson, S.M., "Suicide in Minority Groups: Epidemiological and Cultural Perspectives," *Suicide Over the Life Cycle: Understanding Risk Factors, Assessment, and Treatment*, S.J. Blumenthal and D.J. Kupfer (eds.) (Washington, DC: American Psychiatric Press, in press).

93. Edwards, E.D., and Edwards, M.E., "Group Work Practice With American Indians," *Social Work With Groups* 7(3):7-21, 1984.

94. Egeland, B., Sroufe, L.A., and Erickson, M., "The Developmental Consequence of Different Patterns of Maltreatment," *Child Abuse and Neglect* 7:459-469, 1983.

95. Ellinson, J., Josephson, E., Zanes, A., et al., *A Study of Teenage Drug Behavior* (New York, NY: Columbia School of Public Health, 1973).

96. English, G.M., Northern, T.L., and Fria, T.J., "Chronic Otitis Media as a Cause of Sensorineural Hearing Loss," *Archives of Otolaryngology* 98:19-22, 1973.

97. Erikson, E.H., *Identity: Youth and Crisis* (New York, NY: W.W. Norton & Co., Inc., 1968).

98. Fischler, R., "Child Abuse and Neglect in American Indians," *The IHS Primary Care Provider* 8(10):1-7, 1983.

99. Fischler, R., "Child Abuse and Neglect in American Indian Communities," *Child Abuse and Neglect* 9:95-106, 1985.

100. Fleming, C., "Alternative Community-Based Mental Health Prevention Programs," *Listening Post* 4(1):16-20, 1981.

101. Fleming, C.M., "The Emergence of Culture-Based Mental Health Service for Native Americans," *Listening Post* 4(4):17-29, 1983.

102. Fleming, C.M., "Substance Abuse Prevention in American Indian and Alaska Native Communities: A Literature Review and OSAP Program Survey," final report submitted to the Office for Substance Abuse Prevention in partial fulfillment of contract no. 88-M-075606501-D, Denver, CO, 1989.

103. Forslund, M.A., and Cranston, V.A., "A Self-Report Comparison of Indian and Anglo Delinquency in Wyoming," *Criminology* 13(2):193-197, 1975.

104. Forslund, M.A., and Meyers, R.E., "Delinquency Among Wind River Indian Reservation Youth," *Criminology* 12(1):97-106, May 1974.

105. Fox, J., Manitonabi, D., and Ward, J.A., "An Indian Community With a High Suicide Rate -Five Years After," *Canadian Journal of Psychiatry* 29(5): 425-427, 1984.

106. Fox, J., and Ward, J.A., "Indian Suicide in Northern Ontario," paper presented to the Annual Meeting of the Canadian Psychiatric Association, Saskatoon, Saskatchewan, 1977.

107. Freeman, B.A., and Parkins, C., "The Prevalence of Middle Ear Disease Among Learning Impaired Children," *Clinical Pediatrics* 18(4):205, 1979.

108. French, L.A., and Hornbuckle, J., "Indian Stress and Violence: A Psycho-Cultural Perspective," *Journal of Alcohol and Drug Education* 25(1):36-43, 1979.

109. Fuchs, E., and Havighurst, R.J., *The Self-Esteem of American Indian Youth: The Personal Social Adjustment of American Indian Youth* (Chicago, IL: University of Chicago Press, 1972).

110. Galloway, C.G., and Mickelson, N.I., "Modification of Behavior Patterns of Indian Children," *The Elementary School Journal* 72:150-155, 1971.

111. Gardner, R.C., "The Relationship of Self-Esteem and Variables Associated With Reading for Fourth Grade Pima Indian Children," unpublished Ph.D. dissertation, University of Arizona, 1972.

112. Garrison, C.Z., Schoenback, V.J., and Kaplan, B.H., "Depressive Symptoms in Early Adolescence," *Depression in Multidisciplinary Perspective*, A. Dean (ed.) (New York, NY: Brunner/Mazel, 1984).

113. Gelles, R.J., "The Family and Its Role in the Abuse of Children," *Psychiatric Annals* 17(4):229-232, 1987.

114. Goldstein, G.S., "Behavior Modification: Some Cultural Factors," *The Psychological Record* 24(2):89-91, 1974.

115. Goldstein, G.S., "The Model Dormitory Project," *Psychiatric Annals* 4(9):85-92, 1974.

116. Goldstein, G.S., Oetting, E.R., Edwards, R., et al., "Drug Use Among Native American Young Adults," *International Journal of the Addictions* 14(6):855-860, 1979.

117. Good Practices in Mental Health, *Mental Health in Primary Care: A New Perspective* (London: 1989).

118. Gould, M., and Shaffer, D., "The Impact of Suicide in Television Movies: Evidence of Imitation," *New England Journal of Medicine* 315(11):690-694, 1986.

119. Graburn, N., "Severe Child Abuse Among the Canadian Inuit," *Child Survival*, N. Scheper-Hughes (ed.) (Norwell, MA: Kluwer Academic Publications, 1987).

120. Grant, W.V., "Estimates of School Dropouts," *American Education* 11(4):42, 1975.

121. Green, A.H., "Self-Destructive Behavior in Battered Children," *American Journal of Psychiatry* 135(5):579-582, 1978.

122. Green, B.E., "Psychiatric Consultation to an Indian Tribal Court," *New Directions in Prevention Among American Indian and Alaska Native Communities*, S.M. Manson (ed.) (Portland, OR: Oregon Health Sciences University Press, 1982).

123. Green, B.E., Sack, W.H., and Pambrun, A.A., "A Review of Child Psychiatric Epidemiology With Special Reference to American Indian and Alaska Native Children," *White Cloud Journal* 2(2):22-36, 1981.

124. Gregory, C.D., and Jaranson, J.M., "Psychotherapeutic Drug Use Patterns in a Rural American Indian Population," unpublished manuscript, Mental Health Branch, Portland Area Office, Indian Health Service, Portland, OR, no date.

125. Guilmet, G.M., "Health Care and Health Care Seeking Strategies Among Puyallup Indians," *Culture, Medicine and Psychiatry* 8(4):349-369, 1984.

126. Guyette, S., "Selected Characteristics of American Indian Substance Abusers," *International Journal of the Addictions* 17(6):1001-1014, 1982.

127. Hall, R.L., "Alcohol Treatment in American Indian Populations: An Indigenous Treatment Modality Compared With Traditional Approaches," *Alcohol and Culture: Comparative Perspectives From Europe and America*, T.F. Barbor (ed.) (Washington, DC: U.S. Government Printing Office, 1984).

128. Hammerschlag, C., Mental Health Branch, Phoenix Area Office, Indian Health Service, Phoenix, AZ, personal communication, 1984.

129. Hanks, G.A., "Dependency Among Alaska Native School Dropouts," *A Perspective of the Alaskan Native School Dropout*, B.E. Oviatt (ed.), ERIC document reproduction service no. ED 116876 (Salt Lake City, UT: Social Service Resource Center of Utah, 1973).

130. Hansen, J.C., Stevic, R.R., and Warner, R.W., *Counseling Theory and Process* (Boston, MA: Allyn and Bacon, Inc., 1977).

131. Harvey, E.B., Gazay, L., and Samuels, B., "Utilization of a Psychiatric-Social Work Team in an Alaskan Native Secondary Boarding School," *Annual Progress in Child Psychiatry and Child Development* 15(3):693-710, 1977.

132. Hathorn, J.R., "A Comparative Study of Factors Related to Post-High School Educational Pursuits of Selected American Indians," unpublished Ph.D. dissertation, Oregon State University, 1971.

133. Hauswald, L., "External Pressure/Internal Change: Child Neglect on the Navajo Reservation," *Child Survival*, N. Scheper-Hughes (ed.)

(Norwell, MA: Kluwer Academic Publications, 1987).

134. Haven, S.A., and Imotichez, P.J., "Mental Health Services for American Indians: The USET Program," *White Cloud Journal* 1(3):3-5, 1979.
135. Helfer, R., and Kempe, C., *The Battered Child*, 4th ed. (Chicago, IL: University of Chicago Press, 1987).
136. Ho, M.K., *Family Therapy with Ethnic Minorities* (Beverly Hills, CA: Sage Publications, 1987).
137. Hochkirchen, B., and Jilek, W., "Psychosocial Dimensions of Suicide and Parasuicide in American Indians of the Pacific Northwest," *Journal of Operational Psychiatry* 16(2):24-28, 1985.
138. Hoffman, D.K., "Relationship of Self-Concept and Academic Self- Assessment to the Educational Aspirations of Underprivileged Adolescent Indians," unpublished Ph.D. dissertation, Florida State University, 1969.
139. Holmgren, C.A., "Problematic Alcohol Use and Alienation: A Cross-Cultural Comparison Between Indian and Caucasian High School Students," unpublished Ph.D. dissertation, University of Wyoming, 1981.
140. Horton, J.M., and Annalora, D.J., "Student Dropout Study of Fort Wingate, New Mexico High School," ERIC document reproduction service no. ED 096-084 *BIA Education Research Bulletin* 3(2), 1974.
141. Howell, F.B., "A Comparative Self-Concept Study Between Denver's Indian Children and Others in Grades Four Through Six Using the Coopersmith Self-Esteem Inventory," unpublished Ph.D. dissertation, University of Northern Colorado, 1979.
142. Howie, V.M., Ploussard, J.H., and Stoyer, J., "The 'Otitis-Prone' Condition," *American Journal of Disease of Children* 129(6):676-678, 1975.
143. Indian Center, Inc., Lincoln, NE, and University of Nebraska Lincoln, Department of Sociology, Bureau of Sociological Research, "The Native American Adolescent Health Project: Report on Interview Surveys of Runaways, Parents, Community Leaders and Human Service Workers," unpublished report, Lincoln, NE, July 1986.
144. Institute of Medicine, Division of Mental Health and Behavioral Medicine, *Research on Children and Adolescents with Mental, Behavioral and Developmental Disorders: Mobilizing a National Initiative* (Washington, DC: National Academy Press, 1989).
145. Intergovernmental Health Policy Project, "Mental Health Policy Developments in the Child Mental Health Field," *State Health Reports: Mental Health, Alcoholism, and Drug Abuse* 44, January 1989.
146. Inter-University Consortium for Political and Social Research, *Guide to Resources and Services, 1989-1990* (Ann Arbor, MI: ICPSR, 1989).
147. Ishisaka, H., "American Indians in Foster Care: Cultural Factors and Separation," *Child Welfare* 57(5):299-308, 1978.
148. Jensen, G.F., Straus, J.H., and Harris, V.W., "Crime, Delinquency and the American Indian," *Human Organization* 36(3):252-257, 1977.
149. Jilek-Aall, L., "The Western Psychiatrist and His Non-Western Clientele," *Canadian Psychiatric Association Journal* 21(6):353-359, 1976.
150. Jilek-Aall, L., Jilek, W.G., and Flynn, F., "Sex Role, Culture, and Psychotherapy: A Comparative Study of Three Ethnic Groups in Western Canada," *Journal of Psychological Anthropology* 1(4):473-488, 1978.
151. Joe, J.R., "Disabled Children in Navajo Society," unpublished Ph.D. dissertation, University of California, Berkeley, 1980.
152. Joint Commission on Accreditation of Hospitals, *Consolidated Standards Manual/87* (Chicago, IL: 1986).
153. Jones, D., "Child Welfare Problems in an Alaskan Native Village," *Social Service Review* 43:297-309, 1969.
154. Kahn, M.W., and Delk, I.L., "Developing a Community Mental Health Clinic on an Indian Reservation," *International Journal of Social Psychiatry* 19(3): 299-306, 1973.
155. Kahn, M.W., Lewis, J., and Galvez, E., "An Evaluation of a Group Therapy Procedure With Reservation Adolescent Indians," *Psychotherapy: Theory, Research, and Practice* 11(3):239-242, 1974.
156. Kane, R.L., and Kane, R.A., *Federal Health Care (with Reservations!)* (New York, NY: Springer Publishing Co., 1972).
157. Kaplan, G.J., Fleshman, J.K., Bender, T.R., et al., "Long Term Effects of Otitis Media: A Ten-year Cohort Study of Alaskan Eskimo Children," *Pediatrics* 52(4):577-585, 1973.
158. Kaplan, S.J., and Pelcovitz, D., "Child Abuse and Neglect and Sexual Abuse," *Psychiatric Clinics of North America* 5(2):321-332, 1982.
159. Katz, J., "The Effects of Conductive Hearing Loss on Auditory Function," *ASHA* 20(10):879-886, 1978.
160. Kazdin, A., Moser, J., Colbus, D., et al., "Depressive Symptoms Among Physically Abused and Psychiatrically Disturbed Children," *Journal of Abnormal Psychology* 94(3):298-307, 1985.
161. Kessler, M., and Albee, G.W., "Primary Prevention," *Annual Review of Psychology* 26:557-591, 1975.

162. Kinzie, J.D., Shore, J.H., and Pattison, E.M., "Anatomy of Psychiatric Consultation to Rural Indians," *Community Mental Health Journal* 8(3): 196-207, 1972.

163. Kleinfeld, J., "Characteristics of Successful Boarding Home Parents of Eskimo and Athabascan Indian Students," *Human Organization* 32(2):191-199, 1973.

164. Kleinfeld, J., "A Long Way From Home: Effects of Public High Schools on Village Children Away From Home," ERIC document reproduction service no. ED 087581 (Fairbanks, AK: Institute of Social, Economic, and Government Research, 1973.)

165. Kleinfeld, J., "Getting It Together at Adolescence: Case Studies of Positive Socializing Environments for Eskimo Youth," *New Direction in Prevention Among American Indian and Alaska Native Communitites*, S.M. Manson (ed.) (Portland, OR: Oregon Health Sciences University Press, 1982).

166. Kleinfeld, J., and Bloom, J., "Boarding Schools: Effects on the Mental Health of Eskimo Adolescents," *American Journal of Psychiatry* 134(4):411-417, 1977.

167. Kohr, R.L., "Examining Self-Esteem Needs in School Programs Through Item Analysis," paper presented at the meeting of the American Educational Research Association, Montreal, Quebec, 1982.

168. Korbin, J.E., *Child Abuse and Neglect: Cross-Cultural Perspectives* (Berkeley, CA: University of California Press, 1981).

169. Kraus, R., and Buffler, P., "Sociocultural Stress and the American Native in Alaska: An Analysis of Changing Patterns of Psychiatric Illness and Alcohol Abuse Among Alaskan Natives," *Culture, Medicine and Psychiatry* 3:111-151, 1979.

170. Krush, T.P., Bjork, J., Sindell, P.S., et al., "Some Thoughts on the Formation of Personality Disorder: Study of an Indian Boarding School," *American Journal of Psychiatry* 122:868-876, February 1966.

171. LaFromboise, T.D., and Plake, B.S., "A Model for the Systematic Review of Mental Health Research: American Indian Family, A Case in Point," *White Cloud Journal* 3(3):44-52, 1984.

172. Lambert, M.J., "Evaluating Outcome Variables in Cross-Cultural Counseling and Psychotherapy," *Cross-Cultural Counseling and Psychotherapy*, A.J. Marsella and P.B. Pedersen (eds.) (New York, NY: Pergamon Press, 1981).

173. Lammers, D.M., "Self-Concepts of American Indian Adolescents Having Segregated and Desegregated Elementary Backgrounds," unpublished Ph.D. dissertation, Syracuse University, 1969.

174. Lamphear, V., "The Impact of Maltreatment on Children's Psychosocial Adjustment: A Review of the Research," *Child Abuse and Neglect* 9:251-263, 1985.

175. Lechnyr, R.J., "Powerlessness, Self-Esteem and Empathy: A Study of the Impact of Training on Indian Paraprofessionals," unpublished Ph.D. dissertation, University of Utah, 1974.

176. Lefley, H., "Acculturation, Child Rearing, and Self-Esteem in Two North American Indian Tribes," *Ethos* 4(3):385-401, 1976.

177. Lefley, H., "Self-Perception and Primary Prevention for American Indians," *New Directions in Prevention Among American Indian and Alaska Native Communities*, S.M. Manson (ed.) (Portland, OR: Oregon Health Sciences University Press, 1982).

178. Lefley, H.P., "Effects of a Cultural Heritage Program on the Self-Concept of a Miccosukee Indian Children," *Journal of Educational Research* 67(10):462-466, 1974.

179. Leginski, W.A., Croze, C., Driggers, J., et al., *Data Standards for Mental Health Decision Support Systems*, NIMH Series FN-No. 10 (Washington, DC: U.S. Government Printing Office, 1989).

180. Levy, J.E., "Navajo Suicide," *Human Organization* 24(1):308-318, 1965.

181. Levy, J.E., and Kunitz, S.J., "Indian Reservations, Anomie, and Social Pathologies," *Southwestern Journal of Anthropology* 27(2):97-128, 1971.

182. Levy, J.E., and Kunitz, S., *Indian Drinking* (New York, NY: Wiley Interscience, 1974).

183. Levy, J.E., and Kunitz, S.J., "A Suicide Prevention Program for Hopi Youth," *Social Science and Medicine* 25(8):931-940, 1987.

184. Long, K.A., "Suicide Intervention and Prevention with Indian Adolescent Population," *Issues on Mental Health Nursing* 8(3):247-253, 1986.

185. Loretto, J., Beauvais, F., and Oetting, E.R., "The Primary Cost of Drug Abuse: What Indian Youth Pay for Drugs," *American Indian and Alaska Native Mental Health Research* 2(1):21-32, 1988.

186. Lujan, C., DeBruyn, L.M., May, P.A., et al., "Profile of Abused and Neglected American Indian Children in the Southwest," *Child Abuse and Neglect* 13: 449-461, 1989.

187. Manderscheid, R.W., Branch Chief, Survey Reports, National Insitute of Mental Health, Alcohol, Drug Abuse, and Mental Health Administration, Public Health Service, U.S. Department of Health and Human Services, Rockville, MD, personal communication, November 22, 1989.

188. Manson, S.M. (ed.), *New Directions in Prevention Among American Indian and Alaska Native Communities* (Portland, OR: Oregon Health Sciences Center, University of Oregon, 1982).

189. Manson, S.M., "Physicians and American Indian Healers: Issues and Constraints in Collaborative Health Care," M. Beiser (ed.), *The Healing Arts* (Cambridge, MA: Harvard University Press, in press).

190. Manson, S.M., Ackerson, L.M., Dick, R.W., et al., "Depressive Symptoms Among American Indian Adolescents: Psychometric Characteristics of the CES-D," *Journal of Consulting and Clinical Psychology* (in press).

191. Manson, S.M., Beals, J., Dick, R.W., et al., "Suicide Among American Indians: Risk Factors in an Adolescent Boarding School Population," *Public Health Reports* (in press).

192. Manson, S.M., Dinges, N.G., and Tatum, E., "Prevention Research Among American Indian and Alaska Native Communities: Charting Future Courses for Theory and Practice in Mental Health," *New Directions in Prevention Among American Indian and Alaska Native Communities*, S.M. Manson (ed.) (Portland, OR: Oregon Health Sciences University Press, 1982).

193. Manson, S.M., Duclos, C., Sack, W.H., et al., "Indian Adolescent Suicide Prevention," progress report submitted to the Portland Area Office, Indian Health Service, Portland, OR, 1988.

194. Manson, S.M., and Neligh, G., "Roles and Functions of Community Health Representatives in Delivering Mental Health Care to American Indians and Alaska Natives," final report prepared for Community Health Representative Specialization Task Force, Indian Health Service, Health Resources and Services Administration, Public Health Service, U.S. Department of Health and Human Services, Rockville, MD, 1984.

195. Manson, S.M., Shore, J.H., and Bloom, J.D., "The Depressive Experience in American Indian Communities: A Challenge for Psychiatric Theory and Diagnosis," *Culture and Depression*, A. Kleinman and B. Good (eds.) (Berkeley, CA: University of California Press, 1985).

196. Manson, S.M., Walker, R.D., and Kivlahan, D.R., "Psychiatric Assessment and Treatment of American Indians and Alaska Natives," *Hospital and Community Psychiatry* 38(2):165-173, 1987.

197. Martig, R., and DeBlassie, R., "Self-Concept Comparisons of Anglo and Indian Children," *Journal of American Indian Education* 12(3):9-16, 1973.

198. Martin, H., Beezley, P., Conway, E., et al., "The Development of Abused Children," *Advances in Pediatrics* 21(1):25-73, 1974.

199. Mason, E.P., "Progress Report. Project Catch-Up: An Educational Program for Junior High Students of American Indian, Mexican and Caucasian Ethnic Backgrounds," *Psychology in the Schools* 5(1):272-276, 1968.

200. Mason, E.P., "Project Catch-Up: An Educational Program of Socially Disadvantaged Thirteen and Fourteen Year Olds," *Psychology in the Schools* 6(1):253-257, 1969.

201. May, P.A., *Suicide and Suicide Attempts on the Pine Ridge Reservation* (Pine Ridge, SD: P.H.S. Community Mental Health Program, 1973).

202. May, P.A., "A Survey of the Existing Data on Mental Health in Albuquerque Area," contract no. 3-200423, report prepared for the Office of Mental Health Programs, Indian Health Service, Albuquerque, NM, 1983.

203. May, P.A., "Suicide and Self-Destruction Among American Indian Youths," *American Indian and Alaska Native Mental Health Research* 1(1):52-69, 1987.

204. May, P.A., *Suicide and Suicide Attempts Among American Indians and Alaska Natives: An Annotated Bibliography* (Albuquerque, NM: Office of Mental Health Programs, Indian Health Service, 1987).

205. May, P.A., "Mental Health and Alcohol Abuse Indicators in the Albuquerque Area of Indian Health Service. An Exploratory Chart Review," *America Indian and Alaska Native Mental Health Research* 2(1):33-46, 1988.

206. May, P.A., and Dizmang, L.H., "Suicide and the American Indian," *Psychiatric Annals* 4(9):22-28, 1974.

207. May, P.A., and Hymbaugh, K.J., "A Pilot Project on Fetal Alcohol Syndrome for American Indians," *Alcohol, Health, and Research World* 7:3-9, 1983.

208. May, P.A., Hymbaugh, K.J., Aase, J.M., et al., "Epidemiology of Fetal Alcohol Syndrome Among American Indians of the Southwest," *Social Biology* 30(4):374-387, 1983.

209. Maynard, E., and Twiss, G., "Suicide Attempts," *That These People May Live: Conditions Among the Oglala Sioux of the Pine Ridge Reservation*, DHEW Pub. No. HSM 72-508 (Washington, DC: U.S. Government Printing Office, 1970).

210. McArthur, S., "A Child Psychiatry Team as a Resource for Identification and Treatment of Emotionally Disturbed Indian Children," in the proceedings of "Encircling Our Forgotten," Oklahoma City, OK, June 1-2, 1988.

211. McBride, D.C., "Adolescent Indian Substance Abuse: Ecological and Sociocultural Factors," *Youth and Society* 11(4):475-492, 1980.

212. McClary, G.D., "The Association of Self-Concept and Academic Achievement in Urban Native American Secondary School Students," unpub-

lished Ph.D. dissertation, State University of New York at Buffalo, 1979.

213. McDanal, C., and Bolman, W., "A Study of the Cognitive Status of Abused Children Admitted to a Child Psychiatric Ward," *Hawaii Medical Journal* 38(2):159-160, 1979.

214. McDonald, T., "Group Psychotherapy with Native American Women," *International Journal of Group Psychotherapy* 25(4):410-420, 1975.

215. McEldowney, D., and Kessner, D.M., "Review of the Literature: Epidemiology of Otitis Media," *Otitis Media: Proceedings of the National Conference*, A. Glorig and K.S. Gerwin (eds.) (Springfield, IL: Charles C. Thomas, 1972).

216. McIntosh, J.L., and Santos, J.F., "Suicide Among Minority Elderly: A Preliminary Investigation," *Suicide and Life Threatening Behavior* 11(3):151-166, 1981.

217. McKelvey, R.S., "A Continuum of Mental Health Care for Children and Adolescents," *Hospital and Community Psychiatry* 39(8):870-873, 1988.

218. McShane, D.A., "Otitis Media and American Indians: Prevalence, Etiology, Psychoeducational Consequences, Prevention and Intervention," *New Directions in Prevention Among American Indian and Alaska Native Communities*, S.M. Manson (ed.) (Portland, OR: Oregon Health Sciences University Press, 1982).

219. McShane, D., and Mitchell, J., "Middle Ear Disease, Hearing Loss and Educational Problem of American Indian Children," *Journal of American Indian Education* 19(1):7-11, 1979.

220. McShane, D.A., and Plas, J.M., "Otitis Media and Psychoeducation Difficulties and American Indians: A Review and a Suggestion," *Preventive Psychiatry* 1(3):277-291, 1982.

221. Melville, R.S., "What are the Factors Which Enhance or Retard Educational Achievement of Navajo Indian Students in the Sevier School District?" unpublished Ph.D. dissertation, Utah State University, 1968.

222. Mendoza, M., Acting Chief, Judicial Services, and Coleman, P., Attorney Advisor, Office of the Solicitor, Bureau of Indian Affairs, U.S. Department of the Interior, "Relationship with the FBI and the United States Attorney," letter to BIA/IHS National Oversight Committee for Child Protection, April 7, 1989.

223. Meriam, L., *The Problem of Indian Administration* (Baltimore, MD: Johns Hopkins Press, 1928).

224. Merrill, O.W., "Group Psychotherapy with American-Indian Adolescents: A Study of Reported Changes," *Dissertation Abs. Int.* 35:1392, September-October 1974.

225. Meyer, C., "A Comparative Study of Indian and Non-Indian Ideas of Self-Concept and Morale," unpublished master's thesis, Northern State College, Aberdeen, SD, 1970.

226. Miller, S.I., and Schoenfield, L., "Suicide Attempt Patterns Among the Navajo Indians," *International Journal of Social Psychiatry* 17(3):189-193, 1971.

227. Millstein, S.G., "The Potential of School-Linked Centers to Promote Adolescent Health and Development," working paper prepared for the Carnegie Council on Adolescent Development, Carnegie Corporation of New York, August 1988.

228. Mindell, C., and Stuart, P., "Suicide and Self Destructive Behavior in the Oglala Sioux," *Pine Ridge Research Bulletin* 1:14-23, 1972.

229. Mohatt, G.V., and Blue, A.W., "Primary Prevention as it Relates to Traditionality and Empirical Measures of Social Deviance," *New Directions in Prevention Among American Indian and Alaska Native Communities*, S.M. Manson (ed.) (Portland, OR: Oregon Health Sciences University Press, 1982).

230. Monane, M., Leichter, D., and Lewis, D., "Physical Abuse in Psychiatrically Hospitalized Children and Adolescents," *American Academy of Child Psychiatry* 23:653-658, 1984.

231. National Association of State Mental Health Program Directors, *Final Report: Funding Sources and Expenditures of State Mental Health Agencies: Revenue/Expenditure Study Results, Fiscal Year 1985* (Alexandria, VA: July 1987).

232. National Center for American Indian and Alaska Native Mental Health Research, Indian Boarding School Project, unpublished preliminary data, 1989.

233. National Center for American Indian and Alaska Native Mental Health Research, College Student Life Transitions Project, unpublished preliminary data, 1989.

234. National Task Force on Suicide in Canada, *Suicide in Canada* (Ottawa, Ontario: Health and Welfare Canada, 1987).

234a. Native American Rehabilitation and Training Center, unpublished program report, University of Arizona, Tucson, AZ, 1979.

235. Neligh, G., "Secondary and Tertiary Prevention Strategies Applied to Suicide Among American Indians," *American Indian and Alaska Native Mental Health Research* 1(3):4-18, 1988.

236. Nelson, S.H., Chief, Mental Health Programs Branch, Indian Health Service, Public Health Service, U.S. Department of Health and Human Services, Rockville, MD, personal communication, 1989.

237. Oakland, L., and Kane, R., "The Working Mother and Child: Neglect on the Navajo Reservation," *Pediatrics* 51(5):849-853, 1973.

238. O'Connell, J.C. (ed.), "A Study of the Special Problems and Needs of American Indians With Handicaps Both On and Off the Reservation," report prepared for the Office of Special Education and Rehabilitative Services, U.S. Department of Education, Washington, DC, 1987.

239. Oetting, E., and Beauvais, F., "Epidemiology and Correlates of Alcohol Use Among Indian Adolescents Living on Reservations," paper presented at "Epidemiology of Alcohol Use and Abuse Among U.S. Ethnic Minority Groups," National Institute on Alcohol Abuse and Alcoholism conference, Bethesda, MD, 1985.

240. Oetting, E., Beauvais, F., and Edwards, R.W., "Alcohol and Indian Youth: Social and Psychological Correlates and Prevention," *Journal of Drug Issues* 18(2):87-101, 1988.

241. Oetting, E.R., Edwards, R., Goldstein, G.S., et al., "Drug Use Among Adolescents of Five Southwestern Native American Tribes," *International Journal of the Addictions* 15(3):439-445, 1980.

242. Oetting, E.R., and Goldstein, G.S., "Drug Use Among Native American Adolescents," *Youth Drug Abuse*, G. Beschner and A. Friedman (eds.) (Lexington, MA: Lexington Books, 1979).

243. Olegard, R., Sabel, K.G., Arronsson, M., et al., "Effects on the Child of Alcohol Abuse During Pregnancy," *Acta Paediatrica Scandinavica Supplementum* 275:112-121, 1979.

244. Oregon Commission on Indian Services, *Annual Report* (Salem, OR: State Publishing Department, 1978).

245. Palsgrove, G.L., Senior Advisor, Block Grants, DIADP/OCEA, Alcohol, Drug Abuse, and Mental Health Administration, U.S. Department of Health and Human Services, Rockville, MD, personal communication, June 1989.

246. Pambrun, A., "Suicide Among the Blackfeet Indians," *Bulletin of Suicidology* 7(1):42-43, 1970.

247. Paradise, J.L., "Otitis Media in Infants and Children," *Pediatrics* 65(5):917-943, 1980.

248. Parron, D., Associate Director, Special Populations, National Insitute of Mental Health, Alcohol, Drug Abuse, and Mental Health Administration, Public Health Service, U.S. Department of Health and Human Services, Rockville, MD, personal communication, November 1989.

249. Peake-Raymond, M.P., and Raymond, E.V., "Identification and Assessment of Model Indian Health Service Alcoholism Projects," contract no. 240-083-0100, unpublished report submitted to the U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, Rockville, MD, 1984.

250. Phillips, D.P., and Carstensen, L.L., "Clustering of Teenage Suicides After Television News Stories About Suicide," *New England Journal of Medicine* 315(11):685-689, 1986.

251. Piasecki, J.M., Manson, S.M., Biernoff, M.P., et al., "Abuse and Neglect of American Indian Children: Findings from a Survey of Federal Providers," *American Indian and Alaska Native Mental Health Research* 3(2):43-62, 1989.

252. Plantz, M.C., Hubbell, R., Barrett, B.J., et al., "Indian Child Welfare: A Status Report," *Indian Child Welfare Digest: Model Practice Approaches*, February-March 1989.

253. President's Commission on Mental Health, *The Report of the Special Populations Subpanel on the Mental Health of American Indians and Alaska Natives* (Washington, DC: U.S. Government Printing Office, 1978).

254. Radloff, L.S., "The CES-D Scale: A Self-Report Depression Scale for Research in the General Population," *Journal of Applied Psychological Measurement* 1:385-401, 1977.

255. Ramirez, B., and Smith, B.J., "Federal Mandates for the Handicapped: Implications for American Indian Children," *Exceptional Children* 44(7): 521-528, 1978.

256. Raymond, M.P., and Raymond, E.V., "Identification and Assessment of Model Indian Health Service Alocholism Projects," final report prepared for Indian Health Service, Health Resources and Services Administration, U.S. Department of Health and Human Services, Rockville, MD, 1984.

257. Red Horse, J., "Family Structure and Value Orientation in American Indians," *Social Casework* 61(8):462-467, 1980.

258. Red Horse, J., "American Indian Community Mental Health: A Primary Prevention Strategy," *New Directions in Prevention Among American Indian and Alaska Native Communities*, S.M. Manson (ed.) (Portland, OR: Oregon Health Sciences University Press, 1982).

259. Red Horse, Y., "A Cultural Network Model: Perspectives for Adolescent Services and Paraprofesisonal Training," *New Directions in Prevention Among American Indian and Alaska Native Communities*, S.M. Manson (ed.) (Portland, OR: Oregon Health Sciences University Press, 1982).

260. Regier, D.A., Hirschfeld, R.M.A., Goodwin, F.K., et al., "The NIMH Depression Awareness, Recognition, and Treatment Program: Structure, Aims and Scientific Basis," *Am. J. Psychiatry* 145(11):1351-1357, 1988.

261. Regier, D.A., Meyers, J.K., Kramer, M., et al., "The NIMH Epidemiological Catchment Area Project: Historical Context, Major Objectives, and

Study Population Characteristics," *Archives of General Psychiatry* 41(10):934-941, 1984.

262. Reschly, D.J., and Jipson, F.J., "Ethnicity, Geographic Locale, Age, Sex, and Urban-Rural Residence as Variables in the Prevalence of Mild Retardation," *American Journal of Mental Deficiency* 81(2):154-161, 1976.
263. Resnick, H.L., and Dizmang, L.H., "Suicidal Behavior Among American Indians," *American Journal of Psychiatry* 127(7):882-887, 1971.
264. Resnick, M.D., Blum, R.W., and Harris, L.J., "Correlates of Sexual Abuse Among Adolescents: A Population-Based Study," paper presented to the Annual Meeting of the Society for Adolescent Medicine, San Francisco, CA, March 19-22, 1989.
265. Rhoades, E.R., Assistant Surgeon General, Director, Indian Health Service, Health Resources and Services Administration, Public Health Service, U.S. Department of Health and Human Services, letter to Jack Ellis, Acting Director, Office of Mental Health Programs, Albuquerque, NM, undated.
266. Rhoades, E.R., Marshall, M., Attneave, C., et al., "Mental Health Problems of American Indians Seen in Outpatient Facilities of the Indian Health Service, 1975," *Public Health Reports* 95(4):329-335, 1980.
267. Robbins, M., "Project Nak-nu-we-sha: A Preventive Intervention in Child Abuse and Neglect Among a Pacific Northwest Indian Community," *New Directions in Prevention Among American Indian and Alaska Native Communities*, S.M. Manson (ed.) (Portland, OR: Oregon Health Sciences University Press, 1982).
268. Rogeness, G., Amrung, S., Macedo, C., et al., "Psychopathology in Abused or Neglected Children," *Child Abuse and Neglect* 25:659-665, 1986.
269. Rogler, L.H., "The Meaning of Culturally Sensitive Research in Mental Health," *American Journal of Psychiatry* 146(3):296-303, 1989.
270. Rosenberg, M., and Simmons, R.G., *Black and White Self-Esteem: The Urban School Child* (Washington, DC: American Sociological Association, 1971).
271. Rosenfeld, A., and Sarles, R.M., "Sexual Misuse of Children," *Primary Pediatric Care*, R.A. Hoekelman, S. Blatman, S.B. Friedman, et al. (eds.) (St Louis, MO: C.V. Mosby Co., 1987).
272. Rosenthal, B.G., "Development of Self-Identification in Relation to Attitudes Toward the Self in Chippewa Indians," *Genetic Psychology Monographs* 90(1):43-141, 1974.
273. Ross, C.A., and Davis, B., "Suicide and Parasuicide in a Northern Canada Native Community," *Canadian Journal of Psychiatry* 3(4):331-334, 1986.
274. Ross, P.A., "A Study of the Self-Concept of Academic Ability of Navajo Students in Four Selected School Environments," unpublished Ph.D. dissertation, University of Utah, 1975.
275. Sampson, N.M., "A Study of the Self-Concepts of Black, White, and Indian Students, Grades Three Through Twelve Living in an Urban and a Rural Setting," unpublished Ph.D. dissertation, New York University, 1981.
276. Schacht, A.J., Tafoya, N., and Mirabla, K., "Home-Based Therapy with American Indian Families," *American Indian and Alaska Native Mental Health Research* 3(2):27-42, 1989.
277. Scheper-Hughes, N. (ed.), *Child Survival* (Norwell, MA: Kluwer Academic Publications, 1987).
278. Schoenbach, V.J., Kaplan, B.H., Grimson, R.C., et al., "Use of a Symptom Scale to Study the Prevalence of a Depressive Syndrome in Young Adolescents," *American Journal of Epidemiology* 163(5):791-800, 1982.
279. Schottstaedt, M.F., and Bjork, J.W., "Inhalant Abuse in an Indian Boarding School," *American Journal of Psychiatry* 134(11):1290-1293, 1977.
280. Selinger, A.D., "The American Indian High School Dropout: The Magnitude of the Problem," ERIC document reproduction service no. ED 026164 (Portland, OR: Northwest Regional Educational Lab, 1968).
281. Shattuck, A., and Hoffman, F. (eds.), *The American Indian Family: Strengths and Stress* (Isleta, NM: American Indian Social Research and Development Associates, 1981).
282. Sherarts, I.K., and Associates, *The Formal Education of Menomini Children at the Middle School Level: Students* (Minneapolis, MN: University of Minnesota, Center for Urban and Regional Affairs, 1973).
283. Shore, J.H., "Suicide and Suicide Attempts Among American Indians of the Pacific Northwest," *American Journal of Psychiatry* 18(2):91-96, 1972.
284. Shore, J.H., "Psychiatric Epidemiology Among American Indians," *Psychiatric Annals* 4(11):56-66, 1974.
285. Shore, J.H., "American Indian Suicide—Fact and Fantasy," *Psychiatry* 38(1):86-91, 1975.
286. Shore, J.H., Bopp, J.E., Waller, T.R., et al., "A Suicide Prevention Center on an Indian Reservation," *American Journal of Psychiatry* 128(9):1086-1091, 1972.
287. Shore, J.H., and Keepers, G., "Examples of Evaluation Research in Delivering Preventive Mental Health Services to Indian Youth," *New Directions in Prevention Among American Indian*

and Alaska Native Communities, S.M. Manson (ed.) (Portland, OR: Oregon Health Sciences University Press, 1982).

288. Shore, J.H., and Manson, S.M., "American Indian Psychiatric and Social Problems," *Transcultural Psychiatric Research Review* 20:159-180, 1983.

289. Shore, J.H., and Nicholls, W.M., "Indian Children and Tribal Group Homes: New Interpretation of the Whipper Man," *American Journal of Psychiatry* 132(4):454-456, 1975.

290. Snyder, R., "The First Offender Program: Children and Our Future," *The International Year of the Child 1979-1980*, I.N. Berlin (ed.) (Albuquerque, NM: University of New Mexico Press, 1981).

291. Spaulding, J.M., "Recent Suicide Rates Among Ten Ojibwa Indian Bands in Northwestern Ontario," *Omega* 16(4):347-354, 1985.

292. Speiss, J.M., and Speiss M.L., "Reinforced Readiness Requisites: A Culturally Relevant Behavior Modification Program for Mexican-American, Indian and Black Children," *Proceedings, 81st Annual Convention, APA* (Washington, DC: American Psychological Association, 1973).

293. Squires, B.D., "Bridging the Gap: A Reassessment," mimeo report, Minnesota State Advisory Committee to the U.S. Commission on Civil Rights, St. Paul, MN, 1978.

294. Stage, T.B., and Keast, T.J., "A Psychiatric Service for Plains Indians," *Hospital and Community Psychiatry* 17:74-76, March 1966.

295. Stewart, I., Kirkland, C., Simpson, A., et al., "Some Developmental Characteristics Associated With Otitis Media Effusion," *Recent Advances in Otitis Media With Effusion*, D.J. Lim, C.D. Bluestone, J.O. Klein et al. (eds.) (Toronto, Canada: Decker, 1984).

296. Stewart, J.L., "The Indian Health Service Hearing Program: An Overview," *Hearing Instruments* 26(1):22-23, 26, 1975.

297. Stone, L.A., "Residential Treatment," *Basic Handbook of Child Psychiatry*, vol. 3, S.I. Harrison (ed.) (New York, NY: Basic Books, 1987).

298. Strauss, J.S., "Chronicity: Causes, Prevention, and Treatment," *Psychiatric Annals* 10(9):328-332, 1980.

299. Streissguth, A.P., Landesman-Dwyer, S., Martin, J.C., et al., "Teratogenic Effects of Alcohol in Human and Laboratory Animals," *Science* 209(4454):353-361, 1980.

300. Strimbu, J.L., Schoenfeldt, L.F., and Sims, S.O., "Drug Usage in College Students as a Function of Racial Classification and Minority Group Status," *Research in Higher Education* 1:263-372, 1973.

301. Stroul, B., and Friedman, R.M., *A System of Care for Severely Emotionally Disturbed Children and Youth* (Washington, DC: CASSP Technical Assistance Center, July 1986).

302. Sue, S., "Community Mental Health Services to Minority Groups: Some Optimism, Some Pessimism," *American Psychologist* 32(8):616-624, 1977.

303. Sue, S., Allen, D.G., and Conaway, L., "The Responsiveness and Equality of Mental Health Care to Chicanos and Native Americans," *American Journal of Community Psychology* 6:137-146, 1978.

304. Swanson, D.W., Bratrude, A.P., and Brown, E.M., "Alcoholism in a Population of Indian Children," *Diseases of the Nervous System* 32(12):835-842, 1971.

305. Szasz, M., *Education and the American Indian* (Albuquerque, NM: University of New Mexico Press, 1974).

306. TCI, Inc., "Youth 2000 Initiatives," *Linkages for Indian Child Welfare Programs* 5(6):2, 1987.

307. Termansen, P.E., and Peters, R.W., "Suicide and Attempted Suicide Among Status Indians in British Columbia," paper presented to the World Federation for Mental Health Congress, Salzburg, Austria, 1979.

308. Test, M.A., "Continuity of Care in Community Treatment," *New Directions for Mental Health Services* 2:15-23, 1979.

309. Thompson, M.L., and Nelson, R.H., "Twelve Approaches to Remedy the Dropout Problem," *Clearing House* 38:200-204, 1963.

310. Thornburg, H.D., "An Investigation of a Dropout Program Among Arizona's Minority Youth," *Education* 94(3):249-265, 1974.

311. Topper, M.D., and Curtis, J., "Extended Family Therapy: A Clinical Approach to the Treatment of Synergistic Dual Anomic Depression Among Navajo Agency-Town Adolescents," *Journal of Community Psychology* 15(3):334-348, 1987.

312. Toro, P., "Developmental Effects of Child Abuse: A Review," *Child Abuse and Neglect* 6:423-431, 1982.

313. Tower, M., "An American Indian Community Adolescent Suicide Epidemic," *American Indian and Alaska Native Mental Health Research* 3(1):34-44, 1989.

314. Travis, R., "Suicide in Northwest Alaska," *White Cloud Journal* 3(1):23-30, 1983.

315. Travis, R., "Suicide and Economic Development Among the Inupiat Eskimo," *White Cloud Journal* 3(3):14-21, 1984.

316. Trimble, J.E., "Drug Abuse Prevention Research Needs Among American Indians and Alaska Natives," *White Cloud Journal* 3(3):22-34, 1984.

317. Trimble, J.E., and Richardson, S., "American Indian and Alaska Native Student Attitudes To-

wards Self and School," unpublished manuscript, Department of Psychology, Western Washington University, Bellingham, WA, 1983.

318. Trott, L., Barnes, G., and Denoff, R., "Ethnicity and Other Demographic Characteristics as Predictors of Sudden Drug-Related Deaths," *Journal of Studies on Alcohol* 42(7):564-78, 1981.

319. Tweedy, J.K., "Hearing Loss and Academic Failure," *Public Health, London* 97(3):136-138, 1983.

320. U.S. Commission on Civil Rights, *Social Indicators of Equality for Minorities and Women* (Washington, DC: U.S. Government Printing Office, 1978).

321. U.S. Congress, *American Indian Policy Review Commission: Final Report*, vol. 1, prepared by the American Indian Policy Review Commission (Washington, DC: U.S. Government Printing Office, 1977).

322. U.S. Congress, Office of Technology Assessment, *Indian Health Care*, OTA-H-290 (Springfield, VA: National Technical Information Service, April 1986).

323. U.S. Congress, Office of Technology Assessment, *Children's Mental Health: Problems and Services*, OTA-BP-H-33 (Washington, DC: U.S. Government Printing Office, December 1986).

324. U.S. Congress, Office of Technology Assessment, Health Program, *Special Report: Clinical Staffing in the Indian Health Service* (Washington, DC: February 1987).

325. U.S. Congress, Office of Technology Assessment, *The Quality of Medical Care: Information for Consumers*, OTA-H-386 (Washington, DC: U.S. Government Printing Office, June 1988).

326. U.S. Congress, Senate, Committee on Labor and Public Welfare, Special Subcommittee on Indian Education, *Indian Education: A National Tragedy—A National Challenge*, Report 91-501 (Washington, DC: U.S. Government Printing Office, 1969).

327. U.S. Congress, Senate, Select Committee on Indian Affairs, Special Committee on Investigations, *Final Report and Legislative Recommendations*, Report 101-216 (Washington, DC: U.S. Government Printing Office, 1989).

328. U.S. Department of Commerce, Bureau of the Census, "Projections of the Population of States, by Age, Sex, and Race: 1988 to 2010," Current Population Reports, series P-25, No. 1017 (Washington, DC: U.S. Government Printing Office, 1988).

329. U.S. Department of Health, Education, and Welfare, Office of Human Development, Office of Child Development, Children's Bureau, *Indian Child Welfare: A State-of-the Field Study*, DHEW Pub. No. (OHD) 76-30095 (Washington, DC: U.S. Government Printing Office, 1976).

330. U.S. Department of Health and Human Services, *Report of the Secretary's Task Force on Black and Minority Health: Executive Summary*, vol. 1 (Washington, DC: U.S. Government Printing Office, August 1985).

331. U.S. Department of Health and Human Services, Office of Human Development Services, Administration for Children, Youth and Families, Children's Bureau, National Center on Child Abuse and Neglect, *Executive Summary: National Study of the Incidence and Severity of Child Abuse and Neglect*, DHHS Pub. No. (OHDS) 81-30329 (Washington, DC: U.S. Government Printing Office, 1982).

332. U.S. Department of Health and Human Services, Office of Human Development Services, Administration for Children, Youth and Families, Children's Bureau, National Center on Child Abuse and Neglect, *Literature Review of Sexual Abuse*, D. DePanfilis (ed.), DHHS Pub. No. (OHDS) 87-30530 (Washington, DC: U.S. Government Printing Office, August 1986).

333. U.S. Department of Health and Human Services, Public Health Service, *The 1990 Health Objectives for the Nation: A Midcourse Review* (Washington, DC: U.S. Government Printing Office, 1986).

334. U.S. Department of Health and Human Services, Public Health Service, Alcohol, Drug Abuse, and Mental Health Administration, National Institute on Drug Abuse, *National Household Survey on Drug Abuse: Population Estimates 1985*, DHHS Pub. No. (ADM) 87-1539 (Rockville, MD: 1987).

335. U.S. Department of Health and Human Services, Public Health Service, Alcohol, Drug Abuse, and Mental Health Administration, National Institute on Drug Abuse, *National Household Survey on Drug Abuse: Population Estimates 1988*, DHHS Pub. No. (ADM) 89-1636 (Rockville, MD: 1989).

336. U.S. Department of Health and Human Services, Public Health Service, Alcohol, Drug Abuse, and Mental Health Administration, Office of Substance Abuse Prevention, Minority Substance Abuse Prevention Project, "Ad Hoc Task Force Recommendations for Ethnic Minorities on Alcohol and Other Drug Abuse," undated.

337. U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Center for Health Statistics, unpublished mortality data from table 292A, "Deaths From 282 Selected Causes," Hyattsville, MD, no date.

338. U.S. Department of Health and Human Services, Public Health Service, Health Care Financing Administration, *International Classification of Diseases, 9th Revision, Clinical Modification*, ICD-9-CM, 2nd edition, DHHS Pub. No. 80-1260

(Washington, DC: U.S. Government Printing Office, 1980).

339. U.S. Department of Health and Human Services, Public Health Service, Health Resources Administration, Office of Graduate Medical Education, *Report of the Graduate Medical Education National Advisory Committee to the Secretary, Department of Health and Human Services: Volume II, Modeling, Research, and Data Technical Panel*, DHHS Pub. No. (HRA) 81-652 (Washington, DC: U.S. Government Printing Office, 1981).

340. U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, “Phoenix IHS Area Review: Perceptions of Service for Special Needs Children,” unpublished report, Rockville, MD, 1986.

341. U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, Ad Hoc Group on Mental Health, “Mental Health Recommendations to Everett R. Rhoades, M.D., Director, Indian Health Service,” July 9, 1984.

342. U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, Indian Children's Program, “Phoenix IHS Area Review: Perceptions of Service for Special Needs Children,” internal report, Albuquerque, NM, 1986.

343. U.S. Department of Health and Human Service, Public Health Service, Health Resources and Services Administration, Indian Health Service, Office of Alcohol Programs, “Evaluation of Indian Community Alcoholism Programs,” Rockville, MD, 1983.

344. U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, Office of Health Program Development, “Final Report: Descriptive Analysis of Tribal Health Systems,” May 1987.

345. U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, Office of Health Programs, *IHS Alcoholism/Substance Abuse Prevention Initiative*, (Rockville, MD: 1985).

346. U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, Office of Health Programs, *School/Commmunity-Based Alcoholism/Substance Abuse Prevention Survey* (Rockville, MD: 1987).

347. U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Indian Health Service, Office of Planning Evaluation and Statistics, Division of Program Statistics, internal document #0841K(0062K), Rockville, MD, Feb. 25, 1985.

348. U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, unpublished mortality data, Rockville, MD, no date.

349. U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, *A Progress Report on Indian Alcoholism Activities: 1988* (Rockville, MD: 1988).

350. U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, “Public Law 99-570 Report,” August 1988.

351. U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, unpublished IHS hospital discharge data, Rockville, MD, 1989.

352. U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, Alcoholism and Substance Abuse Program Branch, Acting Prevention Advisor, Rockville, MD, “American Indian/Alaska Native Alcoholism and Substance Abuse Initiative Task Force Meeting—Aug.11, 1988,” Memorandum For the Record through the Chief, Alcoholism and Substance Abuse Program Branch, Aug. 19, 1988.

353. U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, Alcoholism and Substance Abuse Program Branch, and Mental Health Programs Branch, “Memorandum of Agreement Between the Alcoholism and Substance Abuse Program Branch and Mental Health Programs Branch, Indian Health Service,” October 31, 1988.

354. U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, Mental Health Programs Branch, “Mental Health Research Agenda (Draft),” Albuquerque, NM, 1988.

355. U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, Mental Health Programs Branch, “A National Plan for Native American Mental Health Services,” 10th draft, unpublished report, Rockville, MD, June 26, 1989.

355a. U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, Office of Planning, Evaluation and Legislation, Division of Program Statistics, *Trends in Indian Health: 1989* (Rockville, MD: 1989).

356. U.S. Department of Health and Human Services and U.S. Department of the Interior, “Memorandum of Agreement Between Department of Health

and Human Services and Department of the Interior,'' 1987.

357. U.S. Department of Health and Human Services and U.S. Department of the Interior, ''Amendment to Memorandum of Agreement Between Department of Health and Human Services and Department of the Interior,'' 1988.

358. U.S. Department of the Interior, Bureau of Indian Affairs, *Research and Evaluation Report Series*, No. 42.00, reprinted, Washington, DC, 1976.

359. U.S. Department of the Interior, Bureau of Indian Affairs, *Report on BIA Education: Excellence in Indian Education Through Effective School Process* (Washington, DC: U.S. Government Printing Office, 1988).

360. U.S. Department of the Interior, Bureau of Indian Affairs, ''Fiscal Year 1988 Child Abuse and Neglect Data,'' unpublished table, Feb. 21, 1989.

361. U.S. Department of the Interior, Bureau of Indian Affairs, and U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, ''Organizational Management Action Plan Responsibilities (Areas),'' revision no. 1, October 18, 1988.

362. U.S. Department of the Interior, Bureau of Indian Affairs, and U.S. Department of Health and Human Services, Public Health Service, Indian Health Service, National Oversight Committee on Child Protection, ''Forum on Child Protection in Indian Country: A Report,'' unpublished report, April 1989.

363. U.S. Department of the Interior, Office of the Secretary, Assistant Secretary, Indian Affairs, and Director, Indian Health Service, Washington, DC, ''Establishment of Child Protection Teams and Mandatory Child Abuse and Neglect Reporting and Referral Procedures,'' memorandum to all BIA Area Directors, all BIA Area Education Programs Administrators, and all IHS Area Directors, signed April 2, 1987.

364. University of Minnesota, Adolescent Health Program, Minnesota Adolescent Health Survey, unpublished data, 1987.

365. University of Minnesota, Adolescent Health Program, *The State of Adolescent Health in Minnesota*, February 1989.

366. University of Minnesota, Adolescent Health Program, Indian Adolescent Health Survey, unpublished preliminary data, 1989.

367. Van Winkle, N.W., and May, P.A., ''Native American Suicide in New Mexico, 1957-1979: A Comparative Study,'' *Human Organization* 45(4):296-309, 1986.

368. VanDenBerg, J., and Minton, B.A., ''Alaska Native Youth: A New Approach to Serving Emotionally Disturbed Children and Youth,'' *Children Today*, September-October 1987.

369. Wagenfeld, M.O., ''The Primary Prevention of Mental Illness: A Sociological Perspective,'' *Journal of Health and Social Behavior* 13:195-203, June 1972.

370. Ward, J.A., ''Preventive Implications of a Native Indian Mental Health Program: Focus on Suicide and Violent Death,'' *Journal of Preventive Psychiatry* 2(4):371-385, 1984.

371. Watkins, H., and Bradbard, M., ''Child Maltreatment: An Overview With Suggestions for Intervention and Research,'' *Family Relations* 31(4):323-333, 1982.

372. Wax, M.L., and Wax, R.H., ''Dropout of American Indians at the Secondary Level,'' paper presented at the University of Wisconsin-Milwaukee, Milwaukee, WI, ERIC document reproduction service no. ED 018289, 1974.

373. Weibel, O.J., ''Substance Abuse Among American Indian Youth: A Continuing Crisis,'' *Journal of Drug Issues* 14(2):313-335, 1984.

374. Weisz, J.R., Weiss, B., Alicke, M.D., et al., ''Effectiveness of Psychotherapy with Children and Adolescents: A Meta-Analysis for Clinicians,'' *Journal of Consulting and Clinical Psychology* 55(4):542-549, 1987.

375. Wells, V.E., Klerman, G.L., and Deykin, E.Y., ''The Prevalence of Depressive Symptoms in College Students,'' *Social Psychiatry* 22(1):20-28, 1987.

376. Welte, J.W., and Barnes, G.M., ''Alcohol Use Among Adolescent Minority Groups,'' *Journal of Studies on Alcohol* 48(4):329-336, 1987.

377. Westermeyer, J., ''Disorganization: Its Role in Indian Suicide Rates,'' *American Journal of Psychiatry* 128(1):123-124, 1971.

378. Westermeyer, J., ''The Apple Syndrome in Minnesota: A Complication of Racial-Ethnic Discontinuity,'' *Journal of Operational Psychiatry* 10(2):134-139, 1979.

379. Westermeyer, J., and Brantner, J., ''Violent Death and Alcohol Use Among the Chippewa in Minnesota,'' *Minnesota Medicine* 55:749-752, August 1972.

380. White, R., and Cornely, D., ''Navajo Child Abuse and Neglect Study: A Comparison Group Examination of Abuse and Neglect of Navajo Children,'' *Child Abuse and Neglect* 5:9-17, 1981.

381. Willie, C.V., Kramers, B.M., and Brown, B.S., *Racism and Mental Health: Essays* (Pittsburgh, PA: University of Pittsburgh Press, 1973).

382. Wichlacz, C., Lane, J., and Kempe, C., ''Indian Child Welfare: A Community Team Approach to Protective Services,'' *Child Abuse and Neglect* 2:29-35, 1978.

383. Wichlacz, C.R., and Wechsler, J.G., "American Indian Law on Child Abuse and Neglect," *Child Abuse and Neglect* 7:347-350, 1983.

384. Withycombe, J.S., "Relationship of Self Concept, Social Status, and Self-Perceived Social Status and Racial Differences of Paiute Indian and White Elementary School Children," *Journal of Social Psychology* 91(1):337-388, 1973.

385. Wolman, C., "Group Therapy in Two Languages, English and Navajo," *American Journal of Psychotherapy* 24:677-685, 1970.

386. Wu, I.H., and Windle, E., *Ethnic and Sex Specificity in the Relationship of Minority Staffing and in Minority Use of Community Mental Health Centers* (Rockville, MD: Center for Minority Group Mental Health Programs, National Institute of Mental Health, 1978).

387. Young, T.J., "Substance Use and Abuse Among Native Americans," *Clinical Psychology Review* 8(2):123-138, 1988.

388. Young, W.R., "New Mexico Dropout Study," ERIC document reproduction service no. ED 207776 (Sante Fe, NM: New Mexico State Department of Education, 1981).

389. Zinkus, P.W., and Gottleib, M.I., "Patterns of Perceptional and Academic Deficits Related to Early Chronic Otitis Media," *Pediatrics* 66(2):246-253, 1980.

390. Zirkel, P., "Self-Concept and the 'Disadvantage' of Ethnic Group Membership and the Mixture," *Review of Educational Research* 41(2):211-222, 1971.

Superintendent of Documents Publication Order Form

Order Processing Code
*** 6751**

Charge your order.
It's easy! MasterCard VISA CHOICE

☐ **YES,** please send me the following indicated publications:

Indian Adolescent Mental Health (92 pages)
GPO stock number 052-003-01175-1; price $3.50.

1. The total cost of my order is $_______ (International customers please add an additional 25%.) All prices include regular domestic postage and handling and are good through 6/90. After this date, please call Order and Information Desk at 202-783-3238 to verify prices.

Please Type or Print

2. ______________________________
(Company or personal name)

____
(Additional address/attention line)

____
(Street address)

____
(City, State, ZIP Code)

(______) ______________________
(Daytime phone including area code)

3. **Please choose method of payment:**

☐ Check payable to the Superintendent of Documents
☐ GPO Deposit Account ☐☐☐☐☐☐☐ – ☐
☐ VISA, CHOICE or MasterCard Account
☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

____
(Credit card expiration date)

Thank you for your order!

____
(Signature) 1/90

4. **Mail To:** Superintendent of Documents, Government Printing Office, Washington, D.C. 20402-9325

Office of Technology Assessment

The Office of Technology Assessment (OTA) was created in 1972 as an analytical arm of Congress. OTA's basic function is to help legislative policymakers anticipate and plan for the consequences of technological changes and to examine the many ways, expected and unexpected, in which technology affects people's lives. The assessment of technology calls for exploration of the physical, biological, economic, social, and political impacts that can result from applications of scientific knowledge. OTA provides Congress with independent and timely information about the potential effects—both beneficial and harmful—of technological applications.

Requests for studies are made by chairmen of standing committees of the House of Representatives or Senate; by the Technology Assessment Board, the governing body of OTA; or by the Director of OTA in consultation with the Board.

The Technology Assessment Board is composed of six members of the House, six members of the Senate, and the OTA Director, who is a nonvoting member.

OTA has studies under way in nine program areas: energy and materials; industry, technology, and employment; international security and commerce; biological applications; food and renewable resources; health; communication and information technologies; oceans and environment; and science, education, and transportation.

OTA-H-446

JANUARY 1990